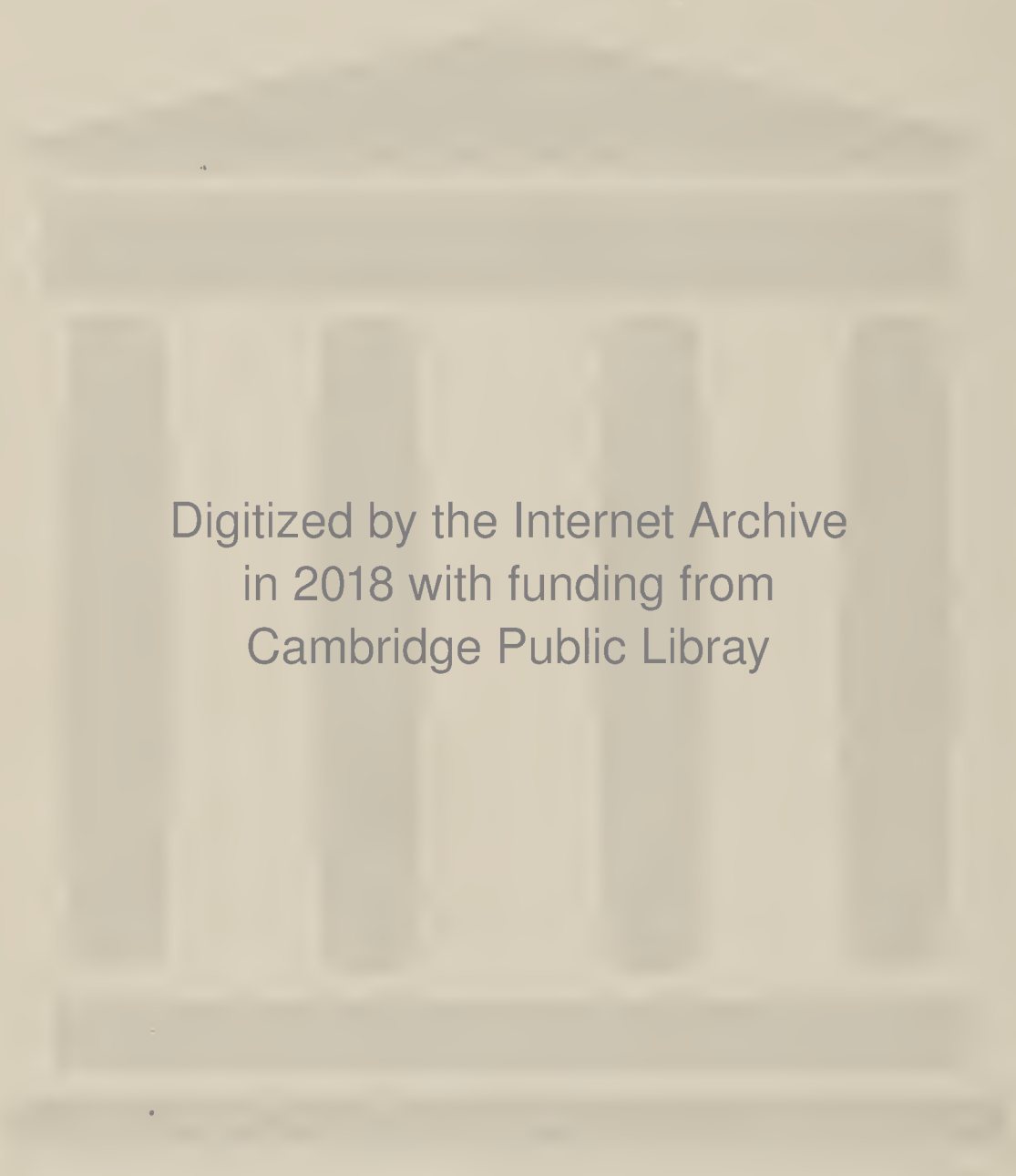




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City of Cambridge.

THE
MAYOR'S ADDRESS

AT THE
ORGANIZATION OF THE CITY GOVERNMENT,

AND THE
ANNUAL REPORTS

MADE TO
THE CITY COUNCIL.



CAMBRIDGE:
WELCH, BIGELOW, AND COMPANY,
PRINTERS TO THE UNIVERSITY.
1868.

CAMBRIDGE
PUBLIC LIBRARY

PRESENTED BY

Mrs. Harv. Blodgett,
July 1890.

City of Cambridge.

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1868.

CITY OF CAMBRIDGE.

In Common Council, January 22, 1868.

ORDERED, That twelve hundred copies of the MAYOR'S INAUGURAL ADDRESS, together with the ANNUAL REPORT OF THE COMMITTEE ON FINANCE, made to the last City Council, with the accompanying documents, and such other documents as have been ordered to be printed by the City Council, be printed, under the direction of the City Clerk, for general distribution.

Adopted and sent up for concurrence.

Attest:

J. WARREN COTTON, *Clerk.*

In Board of Aldermen, January 22, 1868.

Concurred.

Attest:

JUSTIN A. JACOBS, *City Clerk.*

Mrs. B. Blodgett
July, 1870



A D D R E S S

OF

HON. CHARLES H. SAUNDERS,

M A Y O R .

GENTLEMEN OF THE CITY COUNCIL : —

THE great, central principle of our form of government is, that all power is of the people, who at stated periods decide who shall administer their public affairs. This power has recently been exercised, and we have been selected to perform the public duties of the city for the present year. We are the servants of the people, and have taken our official oaths, first asking Divine assistance to guide and direct us in those duties upon which we are now about to enter. Before doing so, I wish here publicly to return my sincere acknowledgments to my fellow-citizens for the unmerited honor conferred in electing me to the mayoralty of my native city, and for the unanimity with which I have been called to this high office.

While many of the cities in our land have suffered from the wasting pestilence the past year, we have been exempt from this, as well as other great calamities, for which our thanks should rise to Him who guides and rules in all the affairs of men.

Next to the importance of a good form of government are the means and resources to maintain and sustain it. I now call your attention briefly to the subject of our

FINANCES.

By the Report of the Committee on Finance, it appears that the total receipts of the year, including balance on hand December 1, 1866, were \$1,079,859.14
 Amount expended for the year ending December 1, 1867, ... 1,001,277.41

Leaving a balance of cash on hand December 1, 1867, of \$78,581.73
 Amount of balance on hand December 1, 1866, . 60,560.51

Increase of balance on hand over last year, \$18,021.22

The amount of funded City Debt
 December 1, 1867, was . . . \$1,013,400.00
 The amount of funded City Debt,
 December 1, 1866, was . 871,092.00

Increase of funded City Debt
 for the year, ... \$142,308.00

The amount expended in the extension of the
 Water Works for the past year was . . . \$188,625.06
 To the above should be added the amount of
 State and County Tax for 1867, due December
 1st and 31st, ... 148,500.22
 From which deduct amount due from the State
 for Corporation Tax, State Aid, and Military
 Bounty, ... 52,616.29

Leaving a balance of \$95,883.93
 To which add amount of funded debt, . . . 1,013,400.00

Making the actual liabilities of the City,
 December 1, 1867, ... \$1,109,283.93

Of the whole amount of the City Debt, the sum of \$541,400 was incurred for the cost of the Water Works to December 1, 1867.

The amount raised by taxation, including State and County Tax for 1867, was	\$ 499,783.20
The amount raised by taxation, including State and County Tax for 1866, was	389,197.24
Increase of amount raised over 1866, ...	\$ 110,585.96

The rate of tax was \$15.20 per thousand, with a discount of four per cent if paid on or before October 10th, making the actual rate but \$14.60 net. The average rate of the State for 1867 was \$16.67 per thousand.

The valuation of the City for 1867, as appears by the books of the Assessors, ...	\$ 31,853,500.00
To which must be added the stocks of corpora- tions owned by the citizens, which are taxed by the State, and do not appear on the Asses- sors' books, estimated at	2,000,000.00
Making the present actual valuation of the City	\$ 33,853,500.00

From the above, it will be seen that the amount raised by taxation for 1867 was upwards of \$110,585 more than the amount raised in 1866, while our rate was below nearly all of the cities, and much below the average of the whole State. This increase, to a large extent, was caused by the unusual heavy State tax of last year, it being \$5,000,000 instead of \$3,000,000 for 1866. It is believed that this tax for the present year will be largely reduced, probably not exceeding \$2,000,000. Should this be the fact, this alone would reduce our rate two and one half dollars per thousand. The increase of the City Debt for the last three years has been caused mainly by the purchase and extension of the Water Works; and it seems right and proper that future generations should bear a portion of this great outlay, in the benefit of which they also will largely participate.

It should be our policy to pay yearly by taxation all of our current expenses, and to keep a fair balance in the treasury, and also to pay off some portion of our indebtedness in those years when we have no extraordinary outlay; but it would be a mistake, under the present rate of taxation, just emerging from the enormous expense of the war, to attempt more than this.

With our population doubled (as it will be) in less than twenty-five years, and with a valuation then of over \$100,000,000 instead of \$34,000,000, as now, it will be much easier to reduce or pay off our indebtedness than to attempt to do so at this time. No portion of the City Debt becomes due the present year, and but \$3,000 is payable until November, 1870.

An appropriation for a new school-house in the Second District will probably be called for the present year; and I would suggest, that, as we have no portion of the debt payable at present, the expense of this house be apportioned so that all shall be paid previous to 1870. Although our City Debt is comparatively a small one, no increase should be permitted, except for extraordinary purposes. While our debt has increased the past year \$142,308, our valuation has also increased \$3,467,800. No bonds of our City should ever be issued for a sum less than their par value, and our credit in the market, for all purposes, should be second to none.

I ask your attention to the importance of examining fully the details of this Report.

SCHOOLS.

Educational matters have, from the earliest period of our history, engaged the attention of the people of Cambridge. I am happy to say, that the schools of our City continue to maintain the high rank they have so long held, and are entitled to the fullest confidence of our citizens. Much care has always been bestowed upon our school accommodations, and our buildings, in their appearance and convenience of construction, will compare favorably with the best in the State. Our High School building

is regarded as a model, both within and without the State. Additional accommodations are, however, much needed in the Second District, and this deficiency has existed for nearly the whole of the past year. It will be for you to consider the expediency of erecting one or more school-houses the present year. Much time is always required for the selection and purchase of a lot, as well as in procuring suitable plans for public buildings ; and should it be found a necessity to build this year, I recommend that action be taken in the premises forthwith. By an amendment to the City Charter, adopted in November last, the number of the Committee is now enlarged to fifteen, thereby much increasing its efficiency for the growing demands of our schools.

The amount expended for their support the past year was \$ 78,382.48, being an increase of \$ 5,558.69 over the preceding one. The governing principle of our schools has the past year again been fully discussed, and some of the participants have been placed upon the board, thereby giving general satisfaction. I have no doubt much benefit will result from these public discussions, and the welfare of our schools will not be injured thereby. The office of Superintendent of Schools has recently been established, and an appropriation from you will be required, while it will devolve upon the Committee to make the selection for this important office. A specialty of the general superintendence of the schools cannot but add much to their present usefulness, and will meet a want long felt. Of all the children taught in our grammar schools, three fourths of the number will not go beyond them for their education. While the course of studies there should be suited to a preparation for the High School, yet the great aim of those studies should be how to make this large number of children most efficient for the great work of life, or, in other words, practical usefulness in matters of every-day life should be the great aim of all teaching in our public schools.

I am happy to say that some permanent provision has recently been made for evening schools in our City. By those kept in previous years much good has been accomplished, and it seems to

me eminently wise to engraft this addition to our system, thus affording a means of education to those who, through misfortune or otherwise, have been deprived of instruction in their youth, and who now, being engaged in the avocations of life, can give no other time for this purpose. I refer you to the able report of the Committee for the details and condition of the several schools.

STREETS AND SIDEWALKS.

Our streets will always require a large expenditure, and we shall be obliged yearly to increase, rather than diminish, the appropriation for this department. As our City increases in wealth, so must we meet the requirements of paving, edgestones, crossings, &c. No expense is more generally appreciated, nor am I aware of anything that tends to beautify and render our City more desirable for a residence, than good streets and sidewalks. Our citizens should be encouraged to set edgestones against their estates, thereby giving a permanent sidewalk of the full width allowed, and properly graded. The value of property on all streets provided with edgestones and sewers is always immediately increased much more than their cost, and I suggest that your appropriation this year for the improvement of sidewalks and crossings be increased. Nearly three miles of edgestones have been set the past year, and the Superintendent estimates the present length of the streets of the City at upwards of one hundred and fifty miles, which at the present time are generally in good condition. A great improvement was initiated by the last City Council in the widening of Main Street, from Harvard to Trowbridge Streets. The narrowness of this portion of Main Street has long caused much inconvenience, and the widening of this thoroughfare has been contemplated for several years. It must be apparent to all that the present as well as the future needs of the City demand this.

The entrance into our City from Boston over Main Street requires that some improvement should be made. I refer to that

portion on the northerly side from the junction of Harvard to the first house west of Washington Street. This territory should be raised and properly graded to a height of not less than three feet, after which, by the occupancy of buildings with basements, this land so eligible might be reclaimed, and would become a paying investment, and the City be relieved from what has been for so many years an unsightly and discouraging tract, and a source of filth and disease to the neighborhood. In a sanitary point of view alone, some action should be taken, and the expense paid by the property thus benefited. In this connection, I would call your attention to the expediency of planting shade-trees on both sides of this portion of Main Street, which in a few years would greatly improve this main entrance to the City. We can hardly expect individual enterprise to initiate this work, and no pains should be spared to perform it faithfully. We cannot afford to delay this matter longer. I would also recommend the sale of the lot of land belonging to the City situated at the corner of Mount Auburn and Eliot Streets. It is not suited in size or location for any prospective want of the City, and is too valuable to remain unused.

Our City, I think, needs at this time a cheap lot of marsh land, on a good street, in a locality that will be valuable in the future, and at present, for the deposit of refuse material, ashes, &c. It cannot fail to be a profitable investment, besides the present convenience. With our facilities, in a few years it would be filled up to grade, without much real cost, and would then become quite valuable. The appropriation for watering streets ought to be increased. It is a great advantage to have the streets properly watered during the summer months. It prevents the surface from being lost, and seems economical in every point of view, in addition to the comfort afforded thereby to our citizens.

I refer you to the report of the Superintendent of Streets for the suggestions and recommendations therein named. The amount expended in this department for the year was \$40,385.06.

BRIDGES.

Our several bridges are generally in good condition. The draw on the West Boston Bridge continues to be a great annoyance to the public, causing inexcusable delays. A pivot draw has been considered by the Committee of the City Council, and seems the best adapted for this bridge, if a double opening is necessary for every vessel. It turns continuously, and when once opened continues to close as the vessel passes along, and is closed nearly as soon as the vessel is clear of the bridge; and being nicely balanced on the pivot or centre, it can be opened and closed easily in a few moments. Its cost is estimated at about \$11,000. Should it be deemed best to use horse-power, the present draw, I am informed, can be put in good condition, on the pivot principle, for about \$5,000. The Railroad Company should bear their proper proportion of the expenses, and I have no doubt would be willing to do so. I recommend that your immediate consideration be given to this matter, as one of the most urgent needs at this time. A petition for widening this bridge, by extending the sidewalks outside of the same, came before the last City Council. It was reported upon favorably by their Committee, but, owing to the lateness of the season, it was referred to you for further action. The amount expended for the year was \$7,698.

CEMETERY.

Much progress has been made during the year in grading and developing the new portion added the last year. About one hundred and seventy-six new lots are now graded, and ready for sale, and are valued at about \$18,000. Many of these lots are unsurpassed in beauty of location, and will compare favorably with, if they do not excel, those in our most favored cemeteries. The wisdom of this purchase is admitted by all, and these grounds are now much visited and admired. Few cemeteries in so short a period have made such progress. With so large a number of lots finished, a much smaller appropriation will be required the present

year. A convenient and substantial office building in place of the one burned is now much needed, and you will consider the expediency of supplying this the present season. The avenue leading from Mount Auburn Street to the gateway should be properly graded, and a good sidewalk made on the easterly side. It is now a great drawback to the approach to the cemetery, being very uneven, if not dangerous, with no provision for visitors on foot. This should be remedied as soon as the season will permit.

Your attention is earnestly called to the dilapidated condition of the old burial-ground in the First Ward. Here more than seven generations of those who have lived and walked these streets sleep their last sleep. Here rests from his labors the godly Shepard, with Mitchell, Oakes, Appleton, Hilliard, and others of the early ministers of the town, together with Dunster, Chauncey, and most of the Presidents of the College for the last two hundred years. Here, too, are the Brattles, the Lees, the Danas, the renowned Allston, and all of the first settlers and proprietors of the town. I can but consider the uses permitted in this ground as discreditable, and the whole general appearance a standing blot upon our City. To be used as a pasture at this late day, to the utter destruction of most of the trees, is inexcusable. I urgently request that this, the oldest burial-place of our ancestors, in a most exposed portion of the City, be put into a proper condition, and that the uses made of the ground for the past year be for the future prohibited.

You will also consider the expediency of grading and otherwise improving the spot formerly used as the burial-ground in the Second Ward. This ground ought not to remain longer in its present condition. Without great expense, it can be made into a beautiful park, which will be of great value to this section, as well as add much to the general appearance of the City. Whenever this shall be done, there will be a large advance in the value of the surrounding estates. Should you deem it expedient to carry out this improvement the present year, it will be for you to consider whether any, and if so, what portion of the expense should be borne by those thus benefited.

WATER WORKS.

The importance of a good system of Water Works to our City, either in a sanitary or mechanical point of view, cannot be over-estimated. During the past year the Works have been largely extended, and on a scale commensurate with the future growth and wants of the City. Nearly seven miles of mains, of various sizes, up to twenty-four inches in diameter, have been laid down, and thirty-one new hydrants have been set, thereby much increasing our means of protection from fire. Much of the time during the year both pumps have been in use, and on one occasion both were disabled and all pumping was stopped for several hours, causing much anxiety for the supply. It being apparent that there was a great deficiency in pumping facilities, on the recommendation of the Commissioners an appropriation was made by the last City Council to supply this want of pumping power.

A contract has been made by the Commissioners for the purchase of one new pump, of large capacity, and suitable for the prospective wants of the City for many years, so that we shall be able to supply both reservoirs easily, and, in case of accident to the one in use, we shall have others in reserve of ample capacity, that will prevent any deficiency of supply. These pumps will cost, including pump-boilers, foundations, connecting-pipes, &c., complete, \$40,000, and will be completed on or before June 1, 1868.

The amount expended for the extension of the

Works for the year was	\$188,625.06
Total cost of Water Works to Dec. 1, 1867,	532,273.64
Income from the Works for 1867, ...	52,733
Income from the Works for 1866, ...	40,073

Increase of income over 1866, ...	\$12,660
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Net income from water-rates and supplies for

1867, ...	\$36,574.39
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The sinking-fund for the redemption of bonds

amounted, July 1, 1867, to	\$18,935.00
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Notice has been given by the last City Council, that an application will be made to the Legislature for authority to issue additional water bonds, as may be wanted from time to time, to the amount of \$500,000. The efficiency of the Works has been much increased the past year, and the investment thus far is a paying one for the City, yielding the last year about 7 per cent on the entire cost, to December 1, 1867, and more than 10 per cent on the cost of December 1, 1866. For further details and recommendations I refer you to the Commissioners' Report.

ASSESSORS' DEPARTMENT.

On this subject I speak from some experience. The matter of taxation has now become a burden to the people, and this burden should be made as light as possible, by avoiding all unnecessary expenditures. Previous to the war our rate was moderate, and if a portion of the property was omitted, or not found by the Assessors, it was not then felt to be a hardship by any. At the present time all this has changed. With an annual heavy State tax (last year of \$5,000,000), and the exemption of all the stocks of the State, excepting shares in our banks, together with the exemption of all the national securities, the duties of this office have become perplexing and arduous, while of vital importance. This department is now one of the most important, for upon it we must depend for the actual ways and means of the City to meet our increased expenditures. The transfers of real estate in 1863 were about 550. In 1867 they were nearly 1,600, showing an unprecedented increase, and a real test of the growth of our City for the last five years. The number of houses built the last year was 198, a large proportion of which were of the first class, and many of them quite expensive, adding much to the beauty of our streets. The valuation for 1863 was \$22,549,200 (including all of the stocks of the State). The valuation for 1867 was \$31,853,500, without the stocks of the State, — being a gain of \$9,304,300 over the valuation of 1863, or more than 40 per cent in five years. If we add the stocks taxed by the State, estimated

at \$ 2,000,000, not included in the above valuation of 1867, the gain will be \$ 11,304,300, or more than 50 per cent on the valuation for the last five years. The increase of 1867 over 1866 was \$ 3,467,800, or more than 12 per cent in a single year. Our population is increasing in nearly the same ratio. The number of polls in 1863 was 5,775. The number in 1867 was 7,807, being a gain of 2,032, or about 36 per cent in the last five years. The present valuation, including the stocks taxed by the State, is \$ 33,853,500. This is not a forced valuation of the property, while the number of polls confirms this great increase of the City in wealth and numbers.

At this rate of increase, our next decade, in 1875, will show a population of over 40,000, with a valuation of more than \$ 50,000,000 ; and I venture the prediction, that in twenty-five years from to-day (or in 1893) the present limits of our City will contain a population of 75,000, with a valuation of upwards of \$ 100,000,000. We offer also great facilities for both mechanical and manufacturing pursuits. Many large establishments have been, and are now being, located here, and the introduction of water has given an increased impetus to these interests.

Measures are in progress by which it is expected that the "Grand Junction Railroad" will be revived, by which additional facilities will be given to supply these establishments with the raw materials used, as well as to deliver the manufactured goods easily and cheaply. Our future supply of gravel for the City will probably at no distant day come from this direction. With these figures before us, even if we make large deductions, our duties are obvious, to lay our plans for the future on a liberal scale and firm basis, to provide for the population which our territory is destined ere long to possess.

CITY HALL.

For several years we have experienced the inconvenience arising from the limited accommodations of the present City

Hall for the City Government and its officers, and the attention of the late City Council was called to this subject by my predecessor. The Dana Library is now removed to another building, at an additional expense, and we have a large accumulation of documents, plans and surveys of streets, water works, sewers, &c., with no suitable place of deposit, and entirely unprotected from fire. By the creation of the office of City Engineer and Superintendent of Schools, both of whom should have suitable rooms in this building, the necessity is more apparent, and it will devolve upon you to consider what is most expedient.

It would seem that the time is not far distant when the wants of our City will require a new City Hall, on a more liberal scale than the present one. No amount of expenditure on the present structure would give us a building commensurate with our future needs. The various rooms occupied by the City officers should not only be convenient and well arranged for the public, but should be made fire proof, and we should possess a building that would compare favorably with other cities, as well as fitly represent our position as the second city in wealth in the State. While I am not prepared to recommend a new building the present year, yet this subject should receive your careful attention. Should a new grammar school-house in the Second District be required, the fact that the present City Hall is eminently adapted, without much alteration, for such purpose, and that the location is one of the best in this section, should be duly considered.

POLICE.

No well-governed city can long continue without a good system of police ; for upon this must we depend to preserve the peace and to execute the laws. Its members should be reliable men, of discretion and good judgment, who should promptly and energetically enforce the laws, and preserve the peace of the community. During the past year our City has been unusually quiet, and full protection has been afforded to

our citizens. The department appears to be in a good state of discipline, and I suggest whether a simple uniform for the whole force would not increase its efficiency. The present force consists of thirty members, besides the chief. I refer you to his report for the full doings of the department for the past year.

PUBLIC COMMONS.

All of our public squares, or commons, I think, should receive your attention the present season. Their past condition has not been creditable to the City. The time has arrived when more care should be bestowed upon their general appearance. The trees should be trimmed and cultivated, and the walks and grounds be kept in a neat and proper condition. Our example should be one for the citizens to emulate. No great expense is needed to do this, but it is important that we plant, if we expect in the future to reap the benefit of shade-trees in our public grounds. How much are we indebted to past generations for the many stately elms that now adorn our streets, and afford us so much comfort and pleasure! Our commons were nearly all given to the public for this use, and while other cities are expending large sums in the purchase, as well as the beautifying of their public grounds, we ought, at least, to keep those given us in trust in a comely condition, and make them attractive for the people. I suggest that the subject be duly considered.

SEWERAGE.

The benefits of good sewerage are being appreciated more by our citizens as their utility is being tested. Large tracts of land are being brought into the market for building purposes which, without some method of drainage, could not be made available. About 3,163 feet of sewers have been built the past year, at an expense of \$4,543. Your attention is called to the large tract of land east of Oxford Street, between Sacramento and Kirkland Streets, which has no drainage whatever. Much inconvenience has been experienced in the portion near Sacramento Street for

several years, and I would suggest that some action be taken the present season to obviate this difficulty. North Cambridge is entirely destitute of sewerage, and with the great growth that this section is now making, will soon require a good system of drainage. The Superintendent in his report recommends that a sewer be constructed in Western Avenue the present season, and that the appropriation for sewers be increased to \$12,000.

SOLDIERS' MONUMENT.

I deem it my duty to remind you that no step has yet been taken by our City to perpetuate the memory of those men who went out from us and gave up their lives, "that the nation might live." "If they have not died in vain," their names should be engraven on something more enduring than our hearts. Whether on marble or granite, their record should be faithfully transmitted in letters of gold, for the guidance and example of those who may come after us.

FIRE DEPARTMENT.

By the report of the Chief Engineer, the department appears to be in a most efficient condition. The number of alarms and fires the past year has been much smaller than usual.

The amount of property destroyed by fire during

the year was	\$ 17,666.00
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The amount of insurance on the same was	15,226.00
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Leaving the net loss	<u>\$ 2,140.00</u>
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The number of alarms was 26.

The number of fires was 17.

It is important that this department should be kept up to the highest point of efficiency, and be ready for any contingency that may arise. Our great increase of property demands this. It will be for you to consider whether any increase of force is expedient to give greater security to our citizens. The question of a better method of fire alarm

has been considered and fully discussed by the last and previous City Councils. With our extended territory, a more expeditious method of alarm would be very desirable. By the introduction of steam fire-engines, our power for extinguishing fires has been largely increased, and a simple and inexpensive system of telegraph alarm seems now needed, and would add very much to the usefulness of this department. With the combustible nature of our buildings, we ought to avail ourselves of this great agent, so as to be prepared for any emergency. Should you deem it expedient, a telegraph alarm attached to the several engine-houses and police stations would for the present answer every purpose, any improvement of which could be added at any time, after the experiment has been tried. I am informed that this system has been adopted by other cities much larger than ours with good effect and general satisfaction.

I refer you to the report of the Chief Engineer for the recommendations therein made, and for other details of this department.

The amount expended for the year was \$ 28,027.23.

While there are many improvements which we may desire in the several departments, and should ordinarily possess, yet, with the present somewhat depressed condition of the business of the country, affecting almost every individual and interest, together with the burden of taxation in various forms, we must forego those which are not of pressing necessity. A large amount will be required in most of the departments this year, and we are expected to exercise the utmost prudence and economy in all of our expenditures.

CITY ENGINEER.

The office of City Engineer was established by ordinance in April last, and was filled in September by the choice of the present incumbent, who immediately entered upon its duties. The continual needs of the Cemetery, and the importance of having the grades and lines of the streets established, together

with a proper system of sewerage, under the direction of a competent engineer, must be apparent to all, and the prospective benefit to the City of this office, I think, cannot be overestimated.

MUNICIPAL REGISTER.

It is now more than ten years since a Municipal Register was published. Within this period, various amendments have been made to the City Charter, and new ordinances have been adopted and others repealed, or materially changed, so that we now have no Register containing the ordinances complete, accessible to the citizens outside of the Clerk's office. It is unreasonable to expect the laws obeyed, unless some provision is made to have them known and understood. I recommend that the Ordinances be revised and published under the supervision of the City Solicitor, in a convenient form for use, the present year.

ALMSHOUSE.

It is a religious duty, as well as a privilege, to provide for the poor among us, and our establishment, under the present efficient Warden and Matron, is a great credit to our City, in its adaptation to the comfort and wants of its inmates. By the Report of the Overseers of the Poor, the average number of inmates for the year was 88.

Amount of appropriation, including the ledge, ...	\$ 28,000.00
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Amount expended	\$26,107.34
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Less amount of proceeds from ledge and farm, 11,326.82	
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Making the actual expense of the establish-

ment for the year	\$14,780.52
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without estimating any interest on the investment. By the report of the Overseers for 1852, it being the first year of the occupancy of the present building, and the last year that the State poor were supported by the City, I find that the average number of inmates for 1852 was 106, and that the expense for their support was \$3,068.53. By their report for 1866, the average number for the year was 80, and the expense for their support was \$15,320.44.

Making due allowance for change of circumstances and increased values brought about by the events of the last six years, yet this great discrepancy, I think, requires your especial attention. This building and land, comprising about 33 acres, had cost, to March 1, 1853, about \$48,000. The building was made extensive, to accommodate the large number of State poor then with us, in addition to our own. At the present time, with no State poor, it would seem much too large for our necessities, and that a considerable portion of the land was too valuable for cultivation ; besides, with so much land, we are obliged to hire largely to keep it in proper condition. By reserving the ledge, and perhaps six or seven acres of land, with a smaller building of brick, proportionate to the number of inmates, we could support all of our poor as comfortably in all respects as at present at a large reduction from our present outlay. Our present building is adapted for many other purposes, and, with the balance of land not required, could be sold to good advantage, and would pay a profit over the cost.

This building to-day could not be erected probably for a sum less than \$60,000, and, after reserving the ledge and land enough suitable for a smaller establishment, I have no doubt that more than the original cost of the whole might be realized from the sale of the present building and balance of land. The estate is a valuable one, but the investment much larger than is necessary. I ask your early attention to this subject, as being one worthy of your careful examination.

This is an institution for the honest poor, and I can see no propriety in its being made the receptacle of those convicted of crime ; and I repeat what has before been recommended, that the ordinance permitting this should be repealed.

CONCLUSION.

Gentlemen of the City Council :

In entering upon the duties of this high and honorable office to-day, unsolicited on my part, and assumed with diffidence, allow me to congratulate you upon the present prosperous condi-

tion of our City. At no period of our history have we been increasing in wealth and numbers as at the present time. With an extensive territory well supplied with pure water, and for the most part provided with sewerage, together with a low rate of taxation, with schools of a high order, and the added literary advantages of the oldest University of the country in our midst, the attractions offered by our City as a place of residence are unequalled. While we should provide for this increase of wealth and population liberally, and in no penurious spirit, at the same time our constituents expect and demand a careful and economical administration of their finances.

With you, gentlemen, rests the responsibility of all the expenditures, the City charter giving the Mayor no voice, nor even a veto power therein. Let no doubtful or unwise appropriation be granted, but consider well the needs and demands of our growing City. I have thus briefly reviewed the various departments of the City, our knowledge of which, of course, before we have entered upon our duties, must be meagre, and somewhat limited. I have made such suggestions as the occasion seemed to require, and submit for your guidance the various reports in detail, made by the City officers, the recommendations of which you will duly consider. In entering upon these duties, we should not lose sight of the great trusts and responsibilities which the people have reposed in our keeping. Let us each and all see to it that their confidence has not been misplaced.

Animated by a desire to promote and advance the highest interests of our beloved City, with harmony in our counsels, and with no sectional feeling or selfish ends, seeking the blessing of Heaven, without which all our labors will be in vain, let us this day go forth manfully to these duties. With this confidence in your fidelity, I shall be happy to co-operate with you in all measures that shall tend to this result.

CHAS. H. SAUNDERS.

R E P O R T

OF

THE COMMITTEE ON FINANCE.

THE Joint Standing Committee on Finance respectfully submit to the City Council their annual report for the financial year ending November 30, 1867.

The amount of appropriations made at the commencement of the year was \$469,082.93, besides \$150,000 for the Extension of the Water Works, for which a City debt was contracted. An additional amount of \$100,000 was afterwards appropriated for the Extension of the Water Works, and a loan authorized for that amount; but no part of that loan has been contracted. The amount of the expenditures from the Treasury during the year for these several appropriations (exclusive of Extension of the Water Works) was \$459,996.51. There has been expended for the extension of the Water Works \$188,625.06, which amount is really so much addition to the property of the City, as during the past year the total expenses of the Supply Account and Care and Repairs of the Works have been paid from the receipts, together with the whole interest on the Water Loan, and the sum of \$13,010.17 paid into the Sinking Fund.

The total receipts into the Treasury during the	
year from all sources (except Temporary Loans)	
were	\$ 762,298.63
Balance in Treasury, December 1, 1866, ...	60,560.51
	\$ 822,859.14
The total expenditures were	744,277.41
Balance in Treasury, December 1, 1867, ...	\$ 78,581.73

The total amount of permanent City debt on the 1st of December, 1866, exclusive of the Dowse Institute and Sanders Temperance Funds, the principal of which is not liable to be reimbursed, was

\$ 851,092.00

Less Sinking Fund of Water Works, ...

5,925.72

\$ 845,166.28

Paid during the year, ... \$ 7,692.00

Added to Sinking Fund for Water

Works, ... 13,010.17

\$ 20,702.17

Deducted from Water Loan made

during the year, ... \$ 150,000.00

\$ 129,297.83

Total debt (exclusive of Dowse and Sanders Funds), December 1, 1867, ...

\$ 974,464.11

The liabilities of the Treasury on the 1st of December, 1867, are as follows, viz.: —

State and County tax due for 1867, ... \$ 148,500.22

Interest due and not paid, ... 1,791.00

Bills approved, but not paid, ... 593.04

\$ 150,884.26

To offset which are the following items, viz.: —

Balance in Treasury, ... \$ 78,581.73

Due from Commonwealth under Corporation Tax

Act, ... 26,508.00

Due from Commonwealth for aid to Volunteers

and their families for 1867, ... 25,000.00

For 1866, ... 26,000.00

Taxes uncollected, ... 52,861.66

Drain and sidewalk assessments uncollected, ... 4,216.24

\$ 213,167.63

During the past year Water Bonds were issued for the extension of the Water Works to the amount of \$150,000, and there was expended . . .	\$ 188,625.06
The original cost of the Water Works in 1865, for which Water Bonds were issued to the amount of \$ 291,400, was	291,480.00
In 1866, Water Bonds were issued to the amount of \$100,000, but there was expended for extension but	88,185.74
Total amount paid for Extension of Water Works,	\$ 568,291.80
Amount of Water Bonds issued, ...	541,400.00
	\$ 26,891.80

As by the act of the Legislature authorizing the purchase of the Water Works by the City the whole net profits are to be converted into a Sinking Fund, and as the total receipts from the Works have all been paid into the Treasury, and the profits so far carried to that fund, it would seem well to make the issues of Water Bonds hereafter correspond with the amounts appropriated in future for the extension of the Works, including the above balance. It can then be seen at a glance what the actual cost of the Works has been, by deducting the amount of the Sinking Fund from the amount of Water Bonds issued. The amount for construction account as given above does not agree exactly with the amount given in the Report of the Water Board. This discrepancy is owing to the fact that the account of Sinking Fund is made up by the City Treasurer to the 1st of June only, according to the provisions of the act authorizing the purchase of the Water Works, while the Water Board have made up theirs to the 1st of December, the end of the financial year. There has also been a loss on the sale of Water Bonds of some \$1,000 or \$1,500, which the Water Board of course do not take into account, but which the City Treasurer has very properly charged to the expenses of the Water Works.

No valuation of the property of the City has been made by the Committee this year ; but no property of the City has been alienated during the year, and there has been no addition to the per-

manent property of the City of any consequence, except the amount expended for the Primary School-house in Ward One, viz. \$7,705.65.

The taxes assessed for the year 1867 were —

For City purposes, ...	\$ 351,282.98	
“ State tax, ...	126,050.00	
“ County tax, ...	22,450.22	
		\$ 499,783.20

Of the above tax the amount col-

lected is	\$ 429,079.07	
Discounted, ...	17,362.54	
Abated, ...	8,718.92	
		455,160.53

Balance uncollected, ...	\$ 44,622.67
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Of the tax of 1866 there remained uncollected,

December 1, 1866,	\$ 29,748.54
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Of that amount there has been collect-

ed, ...	\$ 22,249.09	
Discounted, ...	4.41	
Abated, ...	2,352.42	
		24,605.92

Balance uncollected, ...	\$ 5,142.62
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Of the tax of 1865 there remained uncollected,

December 1, 1866, ...	\$ 6,070.53
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Of that amount there has been col-

lected, ...	\$ 2,233.06	
Abated, ...	1,148.35	
		3,381.41

Balance uncollected, ...	\$ 2,689.12
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Of the tax of 1864 there remained uncollected,

December 1, 1866, ...	\$ 1,907.06
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Of that amount there has been collected, \$ 32.14

Abated, ...	1,660.85	
		1,692.99

Balance uncollected, ...	\$ 214.07
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Of the taxes of 1861, 1862, and 1863 there remained uncollected, December 1, 1866, . . . \$ 218.51
 Of that amount there has been collected, . . . 25.33

Balance uncollected, ... \$ 193.18

The amount of assessments to defray the expense of constructing sidewalks committed to the Treasurer in 1867 was \$ 2,595.89

Of that amount there has been collected, \$ 1,635.55
 Abated, ... 318.88
 1,954.43

Balance uncollected, ... \$ 641.46

Of the previous assessments for the construction of sidewalks there remained uncollected, December 1, 1866, ... \$ 218.86

All of which has been collected.

The amount of drain assessments committed to the Treasurer in 1867 is \$ 3,315.84

Of that amount there has been collected, \$ 268.70
 Abated, ... 265.67
 534.37

Balance uncollected, ... \$ 2,781.47

Of the previous drain assessments there remained uncollected, December 1, 1866, ... \$ 3,883.64

Of that amount there has been collected, ... 3,090.33

Balance uncollected, ... \$ 793.31

The valuation of estates, as appears by the Assessors' books, exclusive of the property of citizens held in certain corporations, now taxed by the State, amounting to not less than \$ 2,000,000, is as follows, viz. : —

District.	Wards.	Polls.	Real Estate.	Personal Estate.	Total.
I.	1 & 5	2,162	\$ 7,873,700	\$ 6,197,800	\$ 14,071,500
II.	2 & 4	3,772	8,429,000	4,302,800	12,731,800
III.	3	1,873	3,361,800	1,688,400	5,050,200
Total. . .		7,807	\$ 19,664,500	\$ 12,189,000	\$ 31,853,500

The rate of assessment the present year was \$15.20 per thousand, subject to the discount of four per cent on all taxes paid on or before October 10th; and the experience of the past few years would seem to determine that about that rate is necessary for the payment of the ordinary expenses of the City, and a fair proportion towards the debt and permanent improvements.

The account of the past year then stands as follows : —

Paid of Permanent Debt, . . .	\$ 7,692.00	
Paid for Primary School-house, .	7,705.65	
“ “ Extension of Water Works, . . .	188,625.06	
“ “ Sinking Fund of Water Works, ...	13,010.17	
Balance in Treasury, December 1, 1866, . . .	\$ 60,560.61	
Balance in Treasury, December 1, 1867, . . .	78,562.73	
		18,002.12
Taxes due and uncollected, Dec. 1, 1866, . . .	\$ 43,465.33	
Taxes due and uncollected, Dec. 1, 1867, . . .	57,077.90	
		13,612.57
		\$ 248,647.57
From which deduct as follows : —		
Bonds issued, ...	\$ 150,000.00	
Amount of State aid received from State, . . .	\$ 37,000.00	
Amount of State aid paid out, ...	25,148.25	
		11,851.75
State and County tax due December 1, 1867, . . .	\$ 148,500.22	
State and County tax due December 1, 1866, . . .	95,674.84	
		52,825.38
		214,677.13
		\$ 33,970.44

The above balance shows that the City financially has gained that amount in the course of the past year.

The accounts of the Treasurer have been critically examined by a sub-committee, and their report is hereto appended.

All of which is respectfully submitted.

EZRA PARMENTER,	} Committee on Finance.
W. A. SAUNDERS,	
SAMUEL B. RINDGE,	
M. T. BIGELOW,	
K. S. CHAFFEE,	
SAMUEL SNOW,	
JABEZ A. SAWYER,	

CITY OF CAMBRIDGE.

In Board of Aldermen January 1, 1868.

Accepted and ordered to be printed with the next City documents.

Sent down for concurrence.

Attest :

JUSTIN A. JACOBS, *City Clerk.*

In Common Council, January 1, 1868.

Concurred.

Attest :

JOS. G. HOLT, *Clerk.*

R E P O R T

CONCERNING

THE ACCOUNTS OF THE TREASURER.

IN COMMITTEE ON FINANCE, January 1, 1868.

THE Sub-Committee appointed by the Committee on Finance to examine the Accounts of the City Treasurer for the financial year ending November 30, 1867, have attended to the duty, and submit the following

R E P O R T :

Your Committee find that the accounts of the City Treasurer have been correctly kept, and that he has satisfactory vouchers for all payments made by him, according to the schedule herewith submitted, showing a balance in his hands of \$78,562.73 on the first day of December, 1867.

The Committee also state that they find in the hands of the City Treasurer \$2,000 in amount of the old Cambridge Water Works Bonds more than the balance of the account shows the City entitled to.

Respectfully submitted,

SAMUEL B. RINDGE, }
W. A. SAUNDERS, } *Sub-Committee.*

SCHEDULE OF EXPENDITURES

FOR

THE FINANCIAL YEAR ENDING NOV. 30, 1867.

For Instruction in Public Schools.

Salaries of Teachers,	. . .	\$ 78,382.48	
		<u> </u>	\$ 78,382.48
Appropriation,	. \$ 77,000.00		
Additional do.,	. 1,473.47		
	<u> </u>	\$ 78,473.47	
Amount of Expenses,	. . .	78,382.48	
		<u> </u>	
Balance unexpended,	. . .	\$ 90.99	

For Hopkins Fund.

Books, ...		\$ 326.53	
		<u> </u>	\$ 326.53
Appropriation, ...		\$ 1,800.00	
Amount of Expenses,	\$ 326.53		
Transferred, ...	1,473.47		
	<u> </u>	\$ 1,800.00	

The amount transferred from this appropriation was applied to the payment of the salary of the Classical Teacher in the High School.

For Compensation of School Committee.

School Committee,	.	.	.	.	\$ 947.91	
Secretary,	.	.	.	.	200.00	
					<u> </u>	\$1,147.91

Appropriation, ...	\$ 1,200.00	
Amount of Expenses, \$ 1,147.91		
Transferred, ...	50.00	
		1,197.91

Balance unexpended, ... \$ 2.09

For Text-Books for High School.

Books, ...	\$ 100.00	
		\$ 100.00
Appropriation, ...	\$ 100.00	
Amount of Expenses, ...	100.00	

For Chemicals for High School.

Chemicals and Apparatus, ...	\$ 328.89	
Repairs of "	57.00	
		\$ 385.89
Appropriation, ...	\$ 500.00	
Amount of Expenses, ...	385.89	
Balance unexpended, ...	\$ 114.11	

For Care and Repairs of School-Houses.

Rent of halls for school-rooms, ...	\$ 427.70	
School furniture, ...	1,151.57	
Fuel, ...	6,065.81	
Care of houses, fires, &c., ...	3,913.33	
Repairs, ...	4,132.68	
Lumber and lime, ...	141.29	
Furnaces, stoves, and repairs, ...	1,392.98	
Clocks and repairs, ...	48.00	
Mats, ink, hardware, &c., ...	504.47	
Books and stationery, ...	1,579.75	
Printing and advertising, ...	552.44	
Engraving and printing diplomas, ...	31.62	
Postage stamps and envelopes, ...	9.20	
Chemicals and apparatus, ...	114.78	
Amount carried forward, ...	\$ 20,065.62	

Amount brought forward,	.	\$ 20,065.62	
Insurance on hall for school-room,	.	75.00	
Collecting statistics,	. . .	5.00	
Gas, gas-fixtures, and repairs,	. . .	74.95	
Water-rates,		273.25	
Truckage,		16.71	
Trees,		24.00	
Ringling bell,		4.00	
			\$ 20,538.53
Appropriation,	.	\$ 15,000.00	
Additional do.,	.	5,600.00	
			\$ 20,600.00
Amount of Expenses,	. .	20,538.53	
Balance unexpended,	. .	\$ 61.47	

For Primary School-House.

Albert Stevens, on contract,	. . .	\$ 5,086.70	
Brick,		630.00	
Furnaces,		288.00	
Snow-guards, &c.,		427.00	
Fence,		540.00	
Tablet,		32.00	
Edgestone,		65.70	
Furniture,		624.00	
Plans,		6.00	
Advertising,		6.25	
			\$ 7,705.65
Appropriation,		\$ 10,000.00	
Amount of Expenses,	\$ 7,705.65		
Transferred,	. . .	2,294.35	
			\$ 10,000.00

For Almshouse and Stone Ledge.

Warden, salary,		\$ 750.00	
Assistant Warden, salary,		266.00	
Matron, salary,		150.00	
Amount carried forward,	. .	\$ 1,166.00	

Amount brought forward,	\$ 1,166.00
Physician, salary,	150.00
Chaplain, “	75.00
Clerk of Overseers, salary,	150.00
Overseer of Sewing-room, salary,	64.50
Provisions, groceries, and supplies for the house,	7,105.57
Dry goods, clothing, &c.,	1,072.60
Sundry laborers,	4,678.58
Fuel,	1,104.61
Fuel delivered to poor out of the house,	1,393.85
Goods “ “	781.23
Cash “ “	274.00
Medicine “ “	31.89
Medical attendance, “ .	150.00
Medicine, ...	86.66
State Lunatic Hospital, board of patients,	794.45
City of Boston, “ “	417.00
“ “ support of paupers,	126.01
“ Worcester, “ “	10.00
“ Charlestown, “ “	218.50
Town of Somerville, “ “	77.10
Commonwealth of Mass., “ “	117.13
House of Correction, “ “	66.71
State Reform School, “ boys, .	317.91
State Nautical School, “ “	383.72
Removing paupers, ...	18.42
Travelling expenses, ...	52.82
Horses and cows, ...	780.00
Carriage robe, ...	20.00
Carts, harnesses, and repairs, . . .	295.47
Grain, meal, hay, and straw, . . .	1,585.49
Horse-shoeing and iron work, ...	552.20
Lumber and lime, ...	186.89
Agricultural tools, hardware, &c., .	438.32
Stoves and repairs, ...	112.04
Amount carried forward,	\$ 24,854.67

Amount brought forward,	\$ 24,854.67
Furniture and carpet,	532.96
Books and newspapers,	11.90
Printing,	11.25
Surveys,	48.50
Fishery,	30.00
Veterinary services,	4.00
Truckage,	36.00
Powder and fuse,	338.75
Cast-steel,	28.14
Funeral expenses,	211.17
	\$26,107.34

Appropriation,	\$ 28,000.00
Amount of Expenses,	\$ 26,107.34
Transferred,	808.40
	26,915.74

Balance unexpended,	\$ 1,084.26
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For Police and Watch.

Chief of Police, salary,	\$ 1,200.00
Services of police officers, including	
substitutes and special police,	32,276.75
Conveyance of prisoners,	588.95
Supplies for prisoners and lodgers,	53.65
Gas for watch-houses,	168.84
Fuel,	163.78
Repairs,	68.68
Hardware, stationery, oil, &c.,	26.02
Water-rates,	43.00
Medical attendance at stations,	12.50
Services rendered to Committee on Health,	30.00
Care of Police Court-room,	121.00
Horse-hire,	16.00
Travelling expenses,	15.00
Posting bills,	4.30
Postage and post-office box,	1.74
Truckage,	.60
Burying nuisances,	5.25
	\$ 34,796.06

33476

33476
1320

Appropriation, . . .	\$ 34,000.00
Additional do., . . .	800.00
	\$ 34,800.00
Amount of Expenses, . . .	34,796.06
Balance unexpended, . . .	\$ 3.94

For Fire Department.

Chief Engineer, salary, . . .	\$ 500.00
Assistant Engineers, " . . .	548.33
Clerk of Engineers, " . . .	18.75
Services of members, . . .	13,463.99
Fines of " . . .	154.00
Furniture, . . .	34.02
Grain, meal, hay, and straw, . . .	1,971.58
Horse, . . .	400.00
Board of horses, . . .	24.00
Horse-hire, . . .	433.25
Harnesses and repairs, . . .	66.34
Repairs, . . .	4,195.63
Hose-carriage, . . .	46.50
Runners, . . .	83.24
Hose and couplings, . . .	1,048.38
Use of water for hydrants, . . .	2,610.00
Water-rates, . . .	64.00
Gas, . . .	243.60
Fuel, . . .	283.06
Freight and truckage, . . .	101.95
Appropriation for Company No. 7, . . .	352.00
Refreshments to out-of-town companies, . . .	48.36
Labor on hydrants and reservoirs, . . .	109.47
Police services, . . .	66.00
Caps and badges, . . .	175.00
Hardware, oil, &c., . . .	400.81
Horse-shoeing, . . .	236.12
Veterinary services, . . .	74.00
Bed-clothes and washing, . . .	241.02
Amount carried forward, . . .	\$ 27,993.40

Amount brought forward, ...	\$ 27,993.40	
Telegram, ...	.83	
Ringling bells, ...	78.00	
Stationery, ...	11.00	
Post-office box	4.00	
		\$ 28,087.23
Appropriation, ...	\$ 25,000.00	
Additional do., ...	3,194.35	
		\$ 28,194.35
Amount of Expenses, ...	28,087.23	
Balance unexpended, ...	\$ 107.12	

For Streets and Paving.

Amount paid for labor, ...	\$ 15,355.41	
Labor and materials for paving, ...	8,067.15	
Gravel, stone, and carting, ...	9,899.21	
Lumber and lime, ...	570.13	
Surveys and plans, ...	143.00	
Horse, ...	425.00	
Horse-shoeing and iron-work, ...	632.12	
Grain, meal, hay, and straw, ...	3,894.27	
Harnesses and repairs, ...	254.42	
Repairs, ...	479.65	
Damages from raising sidewalk, ...	78.21	
Street signs, ...	41.50	
Fuel, ...	20.43	
Gas, ...	24.78	
Water-rates, ...	50.00	
Shovels, hardware, &c., ...	248.03	
Rent of land for storage of stone and gravel, ...	155.00	
Bed-clothing at stable, ...	6.00	
Veterinary services and medicine, ...	41.25	
		\$ 40,385.56
Appropriation, ...	\$ 40,000.00	
Additional do., ...	400.00	
		\$ 40,400.00
Amount of Expenses, ...	40,385.56	
Balance unexpended, ...	\$ 14.44	

For Reservoirs and Drains.

Amount paid for labor, ...	\$ 4,720.46	
Bricks, stone, and drain-pipe, ...	1,613.74	
Lumber and cement, ...	294.16	
Surveys and plans, ...	279.75	
Cess-pool covers and curbs, and gates, ...	22.45	
Tools, nails, and castings, ...	61.51	
		\$ 6,992.07
Appropriation, ...	\$ 6,000.00	
Additional do., ...	1,000.00	
		\$ 7,000.00
Amount of Expenses, ...	6,992.07	
Balance unexpended, ...	\$ 7.93	

For Care and Repairs of Bridges.

Care of draws, ...	\$ 1,931.53	
Repairs, ...	2,394.37	
Repairs on house, ...	12.85	
Water-rates, ...	10.50	
Lumber, and oak piles, ...	2,863.68	
Hardware, &c., ...	349.44	
Paving, ...	55.90	
Replacing buoy-stone, ...	22.00	
Damage to carriage, ...	32.00	
Truckage, ...	26.50	
		\$ 7,698.77
Appropriation, ...	\$10,500.00	
Amount of Expenses, \$ 7,698.77		
Transferred, ...	1,400.00	
		9,098.77
Balance unexpended, ...	\$ 1,401.23	

For Lighting Streets.

Superintendent of Lamps, salary, ...	\$ 200.00	
Gas for street lamps, ...	6,788.69	
Amount carried forward, ...	\$ 6,988.69	

Amount brought forward,	.	\$ 6,988.69	
Fluid, naphtha, matches, &c.,	.	468.54	
Care of and lighting lamps,	.	2,627.33	
Lamp-posts and fitting,	.	760.76	
Lanterns and repairs,	.	440.63	
			\$ 11,285.95

Appropriation,	.	\$ 12,000.00
Amount of Expenses,		11,285.95

Balance unexpended, \$ 714.05

For Watering Streets.

Paid for watering,	.	\$ 2,499.39	
			\$ 2,499.39

Appropriation,	.	\$ 2,500.00
Amount of Expenses,	.	2,499.39

Balance unexpended, .61

For Salaries of City Officers.

Mayor,	.	\$ 1,500.00	
Treasurer and Collector,	.	1,500.00	
City Clerk,	.	1,875.00	
Auditor of Accounts,	.	500.00	
Clerk of Common Council,	.	150.00	
Messenger,	.	600.00	
Board of Assessors,	.	1,200.00	
Superintendent of Streets and Drains,	.	1,200.00	
			\$ 8,525.00

Appropriation,	.	\$ 9,150.00
Amount of Expenses,	.	8,525.00

Balance unexpended, \$ 625.00

For Burial-Grounds.

Superintendent's salary,	.	\$ 875.00	
Sundry workmen,	.	10,347.40	
Use of horse,	.	249.96	
Amount carried forward,	.	\$ 11,472.36	

Amount brought forward, ...	\$ 11,472.36	
Tablets, ...	281.01	
Expense of removals, ...	58.40	
Repairing and furnishing office, ...	239.61	
Safe, ...	53.50	
Restoring records, ...	582.73	
Grading, by contract, ...	2,542.70	
Trees and seeds, ...	139.95	
Sods, ...	212.42	
Paving-stones, ...	102.50	
Cess-pool curbs, ...	107.14	
Drain-pipe, tools, &c., ...	603.89	
Surveys and plans, ...	1,036.88	
Coats, ...	24.00	
Post-office box, ...	4.00	
		\$17,461.09

OLD GROUNDS.

Care of ground, Ward I.	\$ 24.00	
Painting fence, "	73.25	
Repairing hearse-house, "	7.05	
		\$ 104.30
Care of ground, Ward II.	\$ 25.00	
Extra labor, "	100.00	
		125.00
		229.30
		\$ 17,690.39

Appropriation, ...	\$ 17,000.00	
Additional do., ...	700.00	
		\$ 17,700.00
Amount of Expenses, ...	17,690.39	
Balance unexpended, ...	\$ 9.61	

For Payment of City Debt.

Robert Douglass, ...	\$ 7,692.00	
		\$ 7,692.00
Appropriation, ...	\$ 7,692.00	
Amount of Expenses, ...	7,962.00	

For Interest and Bank Discounts.

Cambridge City Bonds, ...	\$ 40,784.00	
“ “ “ (gold), ...	7,500.00	
Lowell Institution for Savings, ...	2,330.00	
Trustees of Sanders Temperance Fund, ...	600.00	
“ “ Dowse Institute, ...	600.00	
“ “ Daniel White Charity, ...	300.00	
Robert Douglass, ...	461.52	
Premium for gold, ...	2,695.30	
Sundry banks, &c., on temporary loans, ...	9,561.40	
		\$ 64,832.22
Appropriation, ...	\$ 65,000.00	
Amount of Expenses, ...	64,832.22	
Balance unexpended, ...	\$ 167.78	

For Dana Library.

Librarian, salary, ...	\$ 225.00	
Assistant do., “	32.50	
Rent of room, ...	125.00	
Care “	125.00	
Books and stationery, ...	401.68	
Binding books, ...	53.10	
Printing, ...	9.00	
Insurance, ...	20.00	
Stove and gas-fixtures, ...	45.96	
Gas, ...	31.92	
Fuel, ...	15.85	
Incidental expenses, ...	8.22	
		\$ 1,093.23
Appropriation, ...	\$ 640.93	
Additional do., ...	650.00	
		\$ 1,290.93
Amount of Expenses, ...	1,093.23	
Balance unexpended, ...	\$ 197.70	

For Volunteers and their Families.

Amount paid to soldiers' families,	\$ 25,000.00	
Advertising, ...	48.25	
Bounty refunded to State, ...	100.00	
		\$ 25,148.25
Appropriation, ...	\$ 30,000.00	
Amount of Expenses, ...	25,148.25	
Balance unexpended,	\$4,851.75	

For Care and Repairs of Water Works.

Superintendent, salary, ...	\$ 1,625.00
Clerk of Water Board, ...	337.50
“ Superintendent, ...	466.67
Water Registrar, ...	500.00
Engineer, ...	1,200.00
Foreman, ...	166.66
Sundry workmen, ...	3,988.32
Repairs, ...	304.30
Meters and repairs, ...	2,026.53
Castings, pipe, and couplings, ...	180.10
Valves, springs, and packing, ...	42.45
Steam-gauge, pump, &c., ...	40.00
Paving, ...	212.10
Derrick, ...	200.00
Surveys, ...	48.00
Assistance in office and distributing bills, ...	534.87
Books and stationery, ...	31.15
Printing and advertising, ...	119.50
Travelling expenses, &c., ...	38.35
Horse, ...	200.00
Board of horse, and shoeing, ...	236.36
Horse-hire, ...	235.42
Wagon and sleigh shoes, ...	256.00
Veterinary services, ...	26.00
Harnesses and repairs, ...	75.25
Amount carried forward, ...	\$ 13,090.53

Amount brought forward, . . .	\$ 13,090.53	
Fuel, freight, and wharfage, . . .	3,428.54	
Tools, cotton waste, oil, &c., . . .	385.06	
Office and shop rent, . . .	600.00	
Insurance, . . .	30.00	
Newspaper, . . .	5.00	
Freight and truckage, . . .	24.08	
Damages, . . .	66.56	
Water-rates refunded, . . .	92.27	
Cash paid for sundries, . . .	91.28	
		\$ 17,813.32
Appropriation, . . .	\$ 15,000.00	
Additional do., . . .	3,000.00	
		\$ 18,000.00
Amount of Expenses, . . .	17,813.32	
Balance unexpended, . . .	\$ 186.68	

For Supply Account of Water Works.

Sundry workmen, . . .	\$ 3,188.63	
Supplies, . . .	6,372.53	
Repairs, . . .	114.39	
Tools, &c., . . .	27.34	
Hydrants, . . .	57.00	
Truckage, . . .	5.25	
		\$ 9,765.14
Appropriation, . . .	\$ 10,000.00	
Amount of Expenses, . . .	9,765.14	
Balance unexpended, . . .	\$ 234.86	

For Extension of Water Works.

Foreman, . . .	\$ 883.34	
Sundry workmen, . . .	23,247.91	
Pipes, and freight on do., . . .	119,069.70	
Water-gates, . . .	4,084.50	
Cement and lime, . . .	1,171.37	
Amount carried forward, . . .	\$ 148,456.82	

Amount brought forward, . . .	\$ 148,456.82
Stone, gravel, and paving, . . .	11,139.91
Lumber and carpenters' work, . . .	710.46
Brick and mason work, . . .	819.84
Strainers, ...	110.48
Drain-pipe, tools, &c., . . .	527.47
Iron-work and castings, . . .	10,218.24
Derrick, blocks, &c., . . .	523.35
Lead, ...	4,812.34
Packing, ...	452.24
Land and right of way for pipe, . . .	3,648.75
Rent of land, ...	150.00
House for engineer, ...	3,387.97
Painting, ...	74.04
Fuel, ...	143.21
Surveys and plans, ...	3,032.70
Travelling expenses, ...	13.24
Truckage, ...	404.00
	\$ 188,625.06

Appropriation, . . .	\$ 150,000.00
Additional do., . . .	100,000.00
	\$ 250,000.00

Amount of Expenses, \$188,625.06	
Transferred, . . .	1,000.00
	189,625.06

Balance unexpended, . . . \$ 60,374.94

For Sinking Fund of Water Works.

Amount paid to Trustees of Fund, . . .	\$ 10,958.40
	\$ 10,958.40
Appropriation, . . .	\$ 6,000.00
Additional do., . . .	4,958.40
	\$ 10,958.40
Amount of Expenses, . . .	10,958.40

For Incidental Expenses.

Legal services and expenses, . . .	\$ 3,061.15
Extra allowance to Treasurer, . . .	1,125.00
“ “ “ City Clerk, . . .	425.00
“ “ “ Sup’t. of Streets, . . .	225.00
“ “ “ Chief of Police, . . .	500.00
“ “ “ Messenger, . . .	300.00
“ “ “ Board of Assessors, . . .	2,775.00
Abstract of records for Assessors, . . .	125.00
Insurance of public buildings, . . .	936.75
Somerville tax-bill, ...	431.52
Belmont “	153.52
Distributing tax-bills, ...	126.80
Abatement of taxes, ...	127.99
Surveys and plans, ...	635.75
Recording births, deaths, and marriages, . . .	500.95
“ deeds, ...	6.75
Reporting deaths, ...	34.80
Books and stationery, ...	394.04
Revenue stamps and postage, ...	291.95
Newspapers, ...	39.37
Steel punch and cancelling-stamp, ...	14.50
Railway tickets, ...	180.00
Armory expenses, ...	425.00
Flag-staffs, flags, and repairs, ...	299.84
Lowering and raising flags and topmasts, . . .	20.00
Labor on public squares, ...	35.71
Painting fences, public squares, ...	103.39
Watering-tank and rent of land, ...	31.00
Building and repairing hay-scales, ...	810.16
Page of Common Council, ...	25.00
Treasurer, for clerical assistance, ...	324.00
City Clerk, “ “ “	750.00
Repayment on purchase of bonds, ...	28.62
Printing and advertising, ...	2,024.61
Furniture for City Hall, ...	156.84
Amount carried forward, ...	<u>\$ 17,445.01</u>

Amount brought forward,	\$ 17,445.01
Safe,	481.80
Fuel,	101.63
Gas,	485.10
Ice,	20.00
Water-rates,	20.00
“ “ for fire hydrants,	2,970.00
Reward for detection of incendiary,	500.00
Co. C, Fifth Regiment, services at musters, &c.,	911.70
Land damages,	2,700.00
Damages for defect in highway,	100.00
Repairs,	145.55
“ at City Hall,	1,046.41
Building bathing-places,	901.00
Wagon,	300.00
Music for High-School Exhibition,	45.00
Lamp on “ Great Bridge,”	30.00
Trees,	250.00
Expenses of cholera hospital,	430.22
Medicines,	32.03
Medical attendance,	325.50
Vaccinating,	20.00
Storing and repairing hearse,	31.00
Care and repairs of clocks,	135.00
Cleaning at City Hall,	92.39
Brooms, mats, &c.,	175.81
Rent and care of ward-room,	60.25
Refreshments for ward-officers,	65.00
Milk Inspector's salary,	150.00
Bell-ringing,	195.38
Rent of land for pound,	20.00
Securing roof of Catholic Church, Ward II.,	10.00
Horse-hire,	14.00
Truckage,	6.55
	\$ 30,216.33
Appropriation,	\$ 25,000.00
Additional do.,	5,250.00
	\$ 30,250.00

Total Appropriation,	.	.	\$ 30,250.00
Amount of Expenses,	.	.	30,216.33
Balance unexpended,	.	.	\$ 33.67

FOR RESERVED FUND.

Appropriation,	.	.	.	\$ 20,000.00
Transferred,	.	.	.	20,000.00

RECAPITULATION OF EXPENDITURES FOR THE FINANCIAL YEAR ENDING NOVEMBER 30, 1867.

	Original Appropriations.	Added subsequently.	Subtracted subsequently.	Appropriations as altered.	Amount of Expenditures.	Balances unexpended.
Instruction in Public Schools,	\$ 77,000.00	\$ 1,473.47	\$ 1,473.47	\$ 78,473.47	\$ 78,332.48	\$ 90.99
Hopkins Fund,	1,800.00			326.53	326.53	
Compensation of School Committee,	1,200.00			1,150.00	1,147.91	2.09
Text-Books for High School,	100.00		50.00	100.00	100.00	
Chemicals "	500.00			500.00	385.89	114.11
Care and Repairs of School-houses,	15,000.00	5,600.00		20,600.00	20,533.53	61.47
Primary School-house,	10,000.00			7,705.65	7,705.65	
Almshouse and Stone Ledge,	28,000.00		2,294.35	27,191.60	26,107.34	1,084.26
Police and Watch,	34,000.00	800.00		34,800.00	34,796.06	3.94
Fire Department,	25,000.00	3,194.35		28,194.35	28,087.23	107.12
Streets and Paving,	40,000.00	400.00		40,400.00	40,385.55	14.44
Reservoirs and Drains,	6,000.00	1,000.00		7,000.00	6,992.07	7.93
Care and Repairs of Bridges,	10,500.00		1,400.00	9,100.00	7,698.77	1,401.23
Lighting Streets,	12,000.00			12,000.00	11,285.95	714.05
Watering "	2,500.00			2,500.00	2,499.39	.61
Salaries of City Officers,	9,150.00			9,150.00	8,525.00	625.00
Burial-Grounds,	17,000.00	700.00		17,700.00	17,690.39	9.61
Payment of City Debt,	7,692.00			7,692.00	7,692.00	
Interest and Bank Discounts,	65,000.00			65,000.00	64,832.22	167.78
Dana Library,	640.93	650.00		1,290.93	1,093.23	197.70
Volunteers and their Families,	30,000.00			30,000.00	25,148.25	4,851.75
Care and Repairs of Water Works,	15,000.00			18,000.00	17,813.32	186.68
Supply Account "	10,000.00	3,000.00		10,000.00	9,765.14	234.86
Extension * "	150,000.00	99,000.00		249,000.00	188,625.06	60,374.94
Sinking Fund "	6,000.00	4,958.40		10,958.40	10,958.40	
Incidental Expenses,	25,000.00	5,250.00		30,250.00	30,216.33	33.67
Reserved Fund,	20,000.00		20,000.00			
Amount of Appropriations,	\$ 619,082.93			\$ 719,082.93	\$ 648,798.70	\$ 70,284.23
Amount of Expenditures,				648,798.70		
Balances unexpended,				\$ 70,284.23		

* \$ 100,000 were added to this appropriation by the creation of a City Debt therefor; and of this amount \$ 1,000 were subsequently transferred to other appropriations.

Dr.

JOS. WHITNEY, TREASURER,

1866.	Cash Balance on hand, ...	\$ 60,560.51
Dec. 1.	J. K. Farwell, account Cambridge Cemetery, ...	5,221.15
	J. Hanscom, Warden, account Cambridge Almshouse, ...	11,326.82
	G. L. Cade, Supt., Paving, Street Offal, &c., ...	1,621.24
	Sundry persons, Drain Assessments, ...	3,359.03
	" " Sidewalk " 	1,854.41
	R. Litchfield, Rent of City Hall, ...	426.50
	Sundry Weighers, Weighing Fees, ...	358.37
	G. F. Seavey, for filling Cistern, ...	5.00
	M. Ricker, Rent of Police Station, ...	110.00
	Rent of Engine House, ...	78.00
	I. C. Curtis, Tuition, ...	50.00
	Lockhart and Seelye, Hearse and Runners, sold, ...	55.00
	Cambridge Water Works, Rent, ...	600.00
	Old Wagon sold, ...	15.00
	Mrs. Blatchford, for entering Lowell Street Drain, ...	25.00
	Rent of Gravel Farm, ...	50.00
	J. A. Jacobs, City Clerk, Circus Licenses, ...	30.00
	" " " " Auctioneers' Licenses, ...	12.00
	Eben. Johnson, Rent of House, Pearl Street, ...	66.00
	T. McIntire, Jr., Clerk Police Court, ...	1,927.57
	C. F. Orne, Librarian, account Dana Library, ...	284.35
	Trustees Hopkins Charity, ...	888.89
	A. F. Fifield, Registrar, account Cambridge Water Works, ...	66,040.66
	State of Massachusetts, State Aid, ...	37,000.00
	" " " Rent of Armories, ...	1,700.00
	" " " Corporation Tax, ...	25,054.35
	" " " State Paupers, ...	25.00
	" " " Militia Bounty, ...	367.50
	Sundry persons and Institutions, Temporary Loan, ...	257,000.00
	City Bonds sold, ...	146,884.65
	Accrued Interest on same, ...	2,558.70
	J. Whitney, Collector, Taxes 1867, ...	429,079.07
	" " " " 1866, ...	22,249.09
	" " " " 1865, ...	2,233.06
	" " " " 1864, ...	32.14
	" " " " 1863, ...	3.33
	" " " " 1862, ...	22.00
	Interest on Taxes, ...	684.75
		\$ 1,079,859.14

CAMBRIDGE, December 2, 1867.

IN ACCOUNT WITH THE CITY OF CAMBRIDGE.

CR.

1866.	State Tax, ...	\$ 75,630.00
Dec. 1.	County Tax, ...	20,044.84
	Robert Douglass, Note, ...	7,692.00
	Interest on Temporary Loan, ...	9,561.40
	" " Permanent Loan, ...	54,797.82
	Sundry persons, per Mayor's Drafts and Orders, ...	576,551.35
	Sundry persons and institutions, Temporary Loan, ...	257,000.00
	Balance on hand, December 2, 1867, ...	78,581.73
		\$1,079,859.14

JOS. WHITNEY, *City Treasurer.*

ACCOUNT OF CITY DEBT, DECEMBER 1, 1867.

Date.	Rate.	To whom payable.	Amount.	Total.	When payable.	Interest paid to.
Nov. 6, 1859.	5½	Lowell Institution for Savings,	\$ 3,000.00		Nov. 6, 1870.	Nov. 6, 1867.
Jan. 23, 1851.	5½	“ “ “	8,000.00		Jan. 23, 1871.	July 23, 1867.
April 6, 1857.	5½	“ “ “	30,000.00		April 6, 1871.	Oet. 6, 1867.
July 1, 1858.	5	Cambridge City Bonds,	7,000.00		July 1, 1878.	July 1, 1867.
July 1, 1859.	5	“ “ “	15,000.00		July 1, 1879.	July 1, 1867.
July 1, 1862.	5	“ “ “	20,000.00		July 1, 1882.	July 1, 1867.
Aug. 1, 1862.	5	“ “ “	20,000.00		Aug. 1, 1882.	Aug. 1, 1867.
Sept. 10, 1862.	5	“ “ “	40,000.00		Sept. 10, 1882.	Sept. 10, 1867.
Sept. 10, 1862.	5	“ “ “	30,000.00		Sept. 10, 1877.	Sept. 10, 1867.
Nov. 20, 1862.	5	“ “ “	14,000.00		Nov. 20, 1882.	Nov. 20, 1867.
Mar. 5, 1863.	5	“ “ “ (gold),	150,000.00		Jan. 1, 1883.	July 1, 1867.
April 1, 1864.	5	“ “ “	100,000.00	\$ 447,000.00	April 1, 1889.	Oet. 1, 1867.
July 1, 1856.	6	Cambridge Water Loan,	50,000.00		July 1, 1881.	July 1, 1867.
May 1, 1865.	6	“ “ “	186,400.00		May 1, 1875.	Nov. 1, 1867.
Aug. 1, 1865.	6	“ “ “	55,000.00		Aug. 1, 1883.	Aug. 1, 1867.
July 2, 1866.	6	“ “ “	100,000.00		July 2, 1886.	July 2, 1867.
April 1, 1867.	6	“ “ “	150,000.00	541,400.00		Oet. 1, 1867.
Oet. 1, 1863.	6	Trustees of Daniel White Charity,	5,000.00		On demand.	Oet. 1, 1867.
June 1, 1858.	6	“ “ Dowse Institute Fund,	10,000.00			June 1, 1867.
Oet. 8, 1864.	6	“ “ Sanders Temperance Fund,	10,000.00	25,000.00		Oet. 8, 1867.
		State Tax,	126,050.00		Dec. 1, 1867.	
		County Tax,	22,450.22	148,500.22	Dec. 31, 1867.	
				\$ 1,161,900.22		

R E P O R T

OF THE

COMMITTEE ON SOLDIERS AND THEIR FAMILIES.

THE Joint Committee on Soldiers and their Families submits to the City Council its report for the year ending November 30, 1867.

The effect of the statute passed in April, 1866, making the amount of State aid proportional to the pension received from the United States has been to lessen the demands upon the treasury.

The City Clerk has continued to serve as the Clerk of the Committee, and has made up the quarterly returns to the Auditor of the Commonwealth.

The whole number of cases in which aid has been granted during the year has been 251. Of these 8 were under the old law. The number now on the list is 240, of which 7 are under the old law.

The appropriation for Volunteers and their Fam-

ilies was \$ 30,000.00

The following sums have been charged to this appropriation : —

For aid paid to soldiers and their families,	\$ 25,000.00
“ a bounty refunded to the State,	100.00
“ printing and advertising,	48.25
	\$ 25,148.25

The monthly payments now amount to a little less than

\$1,600, and it is believed that an appropriation of \$20,000 will be required for the ensuing year.

All which is respectfully submitted,

JOHN M. TYLER,	} Committee on Soldiers and their Families.
JAMES H. SPARROW,	
CHAS. J. McINTIRE,	
SAMUEL W. DUDLEY,	
KNOWLTON S. CHAFFEE,	
ELIJAH H. LUKE,	
CHARLES F. WALCOTT,	
JOHN McDUFFIE,	

CAMBRIDGE, December 19, 1867.

In Board of Aldermen, December 28, 1867.

Accepted, and ordered to be printed with the next City documents.

Sent down for concurrence.

Attest: JUSTIN A. JACOBS, *City Clerk.*

In Common Council, January 1, 1868

Concurred.

Attest: JOS. G. HOLT, *Clerk.*

R E P O R T

OF THE

COMMISSIONERS OF THE CAMBRIDGE CEMETERY.

By the statutes of the Commonwealth, chapter 44 of the acts of 1855, amended by chapter 255 of the acts of 1865, it is the duty of the Board of Commissioners, annually, in the month of December, “to make and render a report of all their doings and proceedings, and of the condition of the Cemetery, and an account of the receipts and expenditures of the same.”

The Commissioners, in compliance with these requirements, now submit their report.

The work of grading on that portion of the Cemetery purchased in 1865, which, at the beginning of the year, was still in progress under the contracts then existing, has since been completed, and the grounds are now in condition to prepare and lay out the lots and paths, in accordance with the plan designed by J. G. Chase, Esq. (now City Engineer), and which has been adopted by the Commissioners for their guidance. The labor and expense of the last two years have been necessarily considerable; but from this time the outlay may be comparatively moderate, and may be principally made under the direction and supervision of the Superintendent.

The expenditures for the year ending November 30, 1867, have been as follows:—

Superintendent's salary,	.	.	.	.	.	\$ 875.00
Sundry workmen,	.	.	.	.	.	10,347.40
Use of horse,	.	.	.	.	.	249.96
Amount carried forward,	.	.	.	.	.	\$ 11,472.36

Amount brought forward,	\$ 11,472.36
Tablets,	281.01
Expense of removals,	58.40
Drain pipe, tools, &c.,	589.76
Trees and seeds,	139.95
Repairing and furnishing office,	239.61
Safe,	53.50
Restoring records,	582.73
John Doody, grading,	1,791.20
David Scanlan, “	751.50
Sods,	212.42
Paving-stones,	102.50
Cess-pool stones,	107.14
Coats,	24.00
Surveys and plans,	1,036.88
Sharpening tools,	14.13
Post-office box,	4.00
	\$ 17,461.09

The receipts have been : —

For burial lots,	\$ 3,683.25
“ burial fees,	796.00
“ care of lots,	540.40
“ grave markers,	4.00
“ hay,	90.00
“ wood,	95.00
“ sedge grass,	12.50
	5,221.15

Actual expense over and above income, \$ 12,239.94 .

Number of lots now prepared and ready for sale : —

On the new grounds,	66
“ Birch, Elm, and Island Avenues,	31
“ Birch Avenue, west side,	16
“ junction of Elm and Oak Avenues,	2
“ small lots on old grounds,	7
“ Summit Avenue,	9

On Lily Path, ...	2
“ Forest and Cedar Avenues, ...	7
“ Cedar Avenue and Hawthorne Path, ...	6
“ Azalea and Begonia Paths, ...	7
Between Summit and Island Avenues, ...	23
Whole number, ...	176
Number of lots sold during the year, ...	63
“ interments during the year, ...	300

The appraisal of lots in the Cemetery ranges from \$ 60 to \$ 200.

The lots comprised in the second series are appraised at 25 cents per foot.

The Commissioners regard the work of the past year as most important in the accomplishment of the purpose the City Council formed fifteen years ago, — that of substituting for the narrow, crowded, and inconvenient burial-grounds a Cemetery, expansive, ornamental, and attractive, which, while it should afford ample room for the interment of the dead, might also be creditable to the good taste and public spirit of the City.

By the records of the City, it appears that in 1853 the City Council passed an order for the purchase, at a cost of \$10,603.69, of a lot of land containing nearly thirty acres situated on the line of Cambridge, but mostly in Watertown, to be appropriated for a Cemetery. The territory thus purchased was, in 1855, by an act of the Legislature, annexed to Cambridge. In 1854, by recommendation of the Joint Standing Committee on the Cemetery, the City Council ordered that the same be called the “ Cambridge Cemetery.” In 1855 an act was procured from the Legislature establishing a Board of Commissioners who should have “ sole care, superintendence, and management of the Cemetery, and who should cause all necessary paths and avenues to be constructed therein, and be planted with trees, shrubs, flowers, and other rural ornaments.”

Under this act the Board of Commissioners have continued the construction of the Cemetery, by grading its surface, travers-

ing it with paths and avenues, and embellishing it with trees and plants.

Its enlargement was found to be necessary, and in 1865 about eleven acres were added to the former purchase, at a cost of \$ 10,922.33.

In 1863, in compliance with an order of the City Council, the Commissioners assigned the lot known as the "Oval Lot," containing about two thousand feet, for the "burial of such of our soldiers as might fall in the defence of our beloved country." This spot, in a conspicuous position, and surrounded by a hedge, now holds the remains of twenty-four soldiers who thus fell.

It is respectfully recommended to the City Council that a monument commemorative of the patriotism of these brave men be erected on this lot.

This brief allusion to the beginning and advancement of this burial-place, towards the fulfilment of the plan of the City Government to locate a rural Cemetery within the borders of the City, seems not improper at this time, when so much progress has been made.

The further improvement need be but gradual, keeping pace with the ordinary demands for lots. The general compliance of the proprietors with the request from the Commissioners to aid in beautifying the grounds by ornamenting and caring for the lots owned by them respectively, indicates that the future contributions to the embellishment of the Cemetery may be made, not only by the City, but by private hands. Such acts encourage the belief, that from year to year the public interest in this Cemetery will deepen; and it will become more and more a matter of pride with the citizens of Cambridge.

EZRA PARMENTER,	} <i>Commissioners of Cambridge Cemetery.</i>
J. H. TYLER,	
JOHN C. FARNHAM,	
C. M. HOVEY,	
DANIEL U. CHAMBERLIN,	
GEORGE S. SAUNDERS,	

In Board of Aldermen, December 28, 1867.

Accepted, and ordered to be printed with the next City documents.

Sent down for concurrence.

Attest : JUSTIN A. JACOBS, *City Clerk.*

In Common Council, January 1, 1868.

Concurred.

Attest : JOS. G. HOLT, *Clerk.*

R E P O R T

OF THE

O V E R S E E R S O F T H E P O O R

THE Overseers of the Poor herewith respectfully submit their Annual Report for the financial year ending November 30, 1867.

The amount of appropriation made by the City

Council at the beginning of the year for the

Almshouse and Stone Ledge was \$ 28,000.00

Whole amount expended, ... 26,107.34

Balance, ... \$ 1,892.66

The receipts have been as follows : —

From products of the farm, . . . \$ 2,907.86

“ piggery, for sale of hogs and pigs, 2,300.55

“ ledge, for stone, ... 5,071.13

“ other cities and towns, . . . 1,106.68

\$ 11,386.22

Amount now due from other cities

and towns for support of paupers, . \$ 399.23

From the State “ “ . 610.00

For stone delivered sundry persons, . 1,351.03

Stone chips, &c., Sup't of Streets, . 813.00

Covering stone delivered sundry per-

sons by order of the City Council, . 400.75

\$ 3,574.01

RECAPITULATION.

Appropriation, ... \$ 28,000.00

Balance unexpended, . . . \$ 1,892.66

Amount of receipts from all sources, 11,386.22

“ now due “ “ 3,574.01

16,852.89

Actual expense over income, . . . \$ 11,147.11

Value of personal property, as appraised 1866,	\$ 16,324.74
“ “ “ “ 1867,	17,507.21
Increase appraised value of personal property over 1866, ...	\$ 1,182.47

The average number of inmates supported at the Almshouse during the year was eighty-eight.

Assistance has been rendered to the poor out of the Almshouse by food, fuel, cash, &c., to the amount of \$3,391.19.

No change has been made this year in the management of the Almshouse from that of former years. The inmates are well cared for through the kind attentions of the Warden and Matron, whose faithfulness to their duties entitles them to our highest approval.

The school, now taught by Mrs. Rand, is in good hands, and the children who attend it cannot fail to profit by the instruction they receive.

The working of the ledge and farm prove a source of profit to the City, the ledge particularly ; and, from the yearly increase of the sales of stone, this property must have a growing value.

The piggery, which was established by the City Council as a police and sanitary measure, requires, in its care, the collection of swill and house offal throughout the City. This work is attended with an expense exceeding considerably the amount of receipts from sales, and draws largely upon the appropriation for the Almshouse.

The attention of the City Council is respectfully called to the necessity of enlarging the piggery buildings and the barn.

EZRA PARMENTER,	} <i>Overseers of the Poor.</i>
M. L. SMITH,	
WILLIAM HUNNEWELL,	
ALONZO STEWART,	
WILLIAM CALDWELL,	
J. WATSON HARRIS,	
WALCOTT RICHARDSON,	

R E P O R T

OF

JAMES R. MORSE, M. D.,
VISITING PHYSICIAN.

To the Overseers of the Poor of the City of Cambridge : —

GENTLEMEN, — I have made regular daily visits to thirty persons at the Almshouse during the year, besides a large number of occasional visits which have been made. Of those visited, eight have died, as follows: two from consumption, two from old age, two from long-continued habits of intemperance, one from apoplexy, and one from dropsy of the head.

Six cases of lung fever, two of typhoid fever, two of caries of the bones of the leg, three of large scrofulous abscesses, four of indolent ulcers, and one of spinal disease, have received medical attendance the past year.

A large number of persons have been received into the House in a very debilitated condition from disease and neglect, nearly all of whom have become healthy. But one or two were too far advanced in disease to receive permanent benefit from nourishing diet or medical assistance.

Two cases of small-pox and one of varioloid have been placed under my care at the Hospital for contagious diseases, all of which recovered.

Three cases of confinement have occurred in the House, and three foundlings have been received at the Almshouse during the year, all of which have been well cared for while remaining with our truly faithful Warden and Matron, whose kindly sympathies are ever cordially extended to the unfortunate and neglected.

I have visited persons out of the House, whenever desired so to do by any member of your Board, to ascertain the condition of those desiring aid from the City.

I have found it necessary to visit the House every alternate day, and every day when the nature of the sickness seemed to require it.

I have made two hundred and twenty-five visits to the sick and feeble persons at the House during the past year; and in all my efforts to restore health to the sick, and comfort to the feeble and unfortunate, I have received the cheerful aid and sympathy of the Warden and his family.

For your many acts of kindness and friendship to me, gentlemen, please accept my warmest thanks.

Respectfully yours,

J. R. MORSE.

CAMBRIDGE, December 31, 1867.

REPORT

OF THE

CHIEF ENGINEER OF THE FIRE DEPARTMENT.

ENGINEER'S OFFICE, FIRE DEPARTMENT,
CAMBRIDGE, December 18, 1867.

To the Honorable Mayor and City Council: —

GENTLEMEN, — In compliance with the requirements of the Fire Ordinance, I present the following report of the condition of the Fire Department, including rolls of the several companies, a list of the location of reservoirs and hydrants, together with a table containing particulars relative to fires and alarms during the year ending this date.

The engine-houses are in good condition. The roll of the Department numbers one hundred and thirty-two men, leaving eighteen vacancies. Forty-one persons have been discharged and forty-five admitted, which shows a fair average membership during the year. This fluctuation in membership is chiefly confined to the hand-engine companies, and is attributable to the lack of enthusiasm attending the drawing of an engine and equipments weighing one and a half tons, and working the same by hand, in competition with engines drawn by horses and worked by steam.

Twenty-six alarms have occurred during the year, seventeen of which were for fires in the City, seven from out of the City, and two from other causes. Six alarms originated in East Cambridge, eight in the Port, three in Old Cambridge, and two in North Cambridge. Engines have been used at eleven fires in the City. The Department has rendered assistance at fires out of the City twice, and has received assistance twice.

This shows the number of alarms to be less than that of any other year during the last seventeen. The loss by fire during the year is \$17,666. Insurance on losses, \$15,266.

The principal losses were those of Mr. Z. L. Raymond's dwelling-house and Charles Foster's bakery, both of which, being situated three quarters of a mile from the alarm-bell, were entirely destroyed by the time the first engine arrived at the fire, owing to the delay in getting the bells rung.

Owing to the infrequent use of the apparatus, the expenses have been much less than usual, and no addition to the facilities for the extinguishing of fires has been made for the last three years, except the furnishing of a better supply of water, notwithstanding the increased liabilities consequent upon the growth of the City in dwellings and manufactories.

I trust that the advantages derived from the working of fire-alarm telegraphs have become so apparent, that its adoption in our City will no longer be a subject for future consideration, and that our finances will be in a condition to admit of the appropriation of a sum sufficient to meet the expense of the same, and of placing an additional steamer and a four-wheeled horse hose-carriage in the department.

Thirty-two three-inch hydrants have been put in this year, located chiefly on the large pipe recently laid, from which an abundant supply of water can be relied upon, should occasion require.

That portion of Cambridgeport south of Main Street is poorly supplied with water for fire purposes, there being but nine hydrants and six reservoirs in that rapidly growing section.

I desire to call attention to the fact that some of the covers to reservoirs being located on the side of the street, and in many cases at the corners, the removal of snow to render them available makes it unsafe for public travel. I would therefore recommend that four-inch pipes be inserted in such reservoirs, and brought through the sidewalk, having a connection to which the suction-hose of engines can readily be attached above the surface of the ground.

The Department has been prompt and efficient, and I am

pleased to say that, unlike times in the past, there exists nothing but a healthy rivalry to excel in the discharge of their respective duties.

Respectfully submitted,

GEO. B. EATON,
Chief Engineer of Fire Department.

BOARD OF ENGINEERS.

Chief Engineer.

GEORGE B. EATON, Columbia, cor. Washington Street.

Assistant Engineers.

SAMUEL M. FRYE, Main, near Harrison (Sec. of Board).
 THEODORE COLLAMORE, Pleasant, near River Street.
 THOMAS J. CASEY, Cambridge, near Sixth Street.
 JACOB A. HOLT, Appian Way.

Cambridge Steam Fire Engine Company, No. 1.

House on Church Street, Ward 1.

AI ROLLINS,	<i>Foreman.</i>
ELBRIDGE E. KNIGHT,	<i>Assistant Foreman.</i>
EDWARD E. PRIEST,	<i>Engineer.</i>
DAVID THOMAS,	<i>Fireman.</i>
HIRAM W. HOOKER,	<i>Driver.</i>
F. B. PULLEN,	<i>Driver of Hose Carriage.</i>

Hosemen.

John Kinnear,	William Woodland,
Warren Ivers,	John H. Sanderson,
George O. Rollins,	George J. Blaisdell,
William T. Gibson,	Edward F. Campbell.

Condition of House and Apparatus.

House, Engine with all the Equipments, 24 feet of Suction Hose, 3 Horses, 3 Harnesses, Horse Hose Carriage, 1250 feet double-riveted Leather Hose, 2½-inch, 150 feet single-riveted, 250 feet 6-ply Rubber, 200 feet Cotton, 2 Pipes, 3 Buckets, 1 Axe, 2 Blunderbusses, in good condition.

Engine built by Amoskeag Manufacturing Company, Manchester, N. H., and put in service September 18, 1864.

All of our steamers are of one pattern, and of the second class, have one steam cylinder $8\frac{1}{2}$ inches in diameter, one double-acting vertical plunger pump of $4\frac{3}{4}$ inches diameter with 12-inch stroke.

They will discharge 400 gallons of water per minute if required; will throw two $\frac{7}{8}$ -inch streams 210 feet each, or one $1\frac{1}{8}$ -inch stream 250 feet. Two copper tanks are attached containing fresh water, with which to furnish the boiler when using salt water upon a fire. With fuel and water, as run to fires, weight about 6,000 lbs. The Horse Hose Carriages, which accompany the Engines, were built by Messrs. Hunneman & Co., of Roxbury. They are two-wheeled, and capable of carrying 900 feet of Hose; weight, as run to fires, 1,600 pounds.

An Engineer, Driver of Steamer, and Driver of Hose Carriage are permanently employed. These, together with a Fireman and ten Hosemen, constitute the entire company of a Steamer. Sleeping accommodations are furnished for one member in addition to those permanently employed.

Union Steam Fire Engine Company, No. 2.

House on Main, near Windsor Street, Ward 4.

WILLIAM CADE,	<i>Foreman.</i>
THOMAS H. LUCY,	<i>Assistant Foreman.</i>
WILLIAM NICHOLSON,	<i>Engineer.</i>
NATHAN HUTCHINSON,	<i>Fireman.</i>
JOHN WALKER,	<i>Driver.</i>
JOSEPH CARTWRIGHT,	<i>Driver of Hose Carriage.</i>

Hosemen.

Daniel McCarty,	Thomas Wiseman,
Simon Hitchcock,	Jesse Haley,
Eldorado Osborn,	George W. Lamson,
Charles A. Paine,	Amos Jarvis.

Condition of House and Apparatus.

House, Engine with all the Equipments, 34 feet of Suction Hose, 3 Horses, 4 Harnesses, Horse Hose Carriage, 1,550 feet 2½-inch double-riveted Leather Hose, 50 feet single-riveted, 100 feet 6-ply Rubber, 2 Pipes, 3 Buckets, 1 Axe, 2 Blunderbusses, in good condition; 200 feet Rubber, 350 feet 2-inch Leather, ordinary.

Engine built by Amoskeag Manufacturing Company, Manchester, N. H.; put in service August 1, 1863.

Fuel Wagon housed on Cherry Street, near Main Street.

Niagara Steam Fire Engine Company, No. 3.

House on Cambridge, near Third Street, Ward 3.

WILLIAM M. LORING,	<i>Foreman.</i>
HENRY BAKER,	<i>Assistant Foreman.</i>
HIRAM BLOOD,	<i>Engineer.</i>
MOSES DUDLEY,	<i>Fireman.</i>
JAMES S. CASEY,	<i>Driver.</i>
LORENZO DALE,	<i>Driver of Hose Carriage.</i>

Hosemen.

Samuel M. Dustin,	Francis P. Carr,
James Porter,	William Newman,
William Dugan,	Joseph Rogers.
Thomas Howard,	

Condition of House and Apparatus.

House, Engine with all the Equipments, 24 feet of Suction Hose, 3 Horses, 3 Harnesses, Horse Hose Carriage, 700 feet double-riveted Leather Hose, 2 Pipes, 3 Buckets, 1 Axe, 2 Blunderbusses, in good condition; 650 feet double-riveted Leather Hose, 100 feet single-riveted, 200 feet Rubber, ordinary.

Engine built by Amoskeag Manufacturing Company, Manchester, N. H.; put in service September 18, 1862.

Hydrant Engine Company, No. 4.*House at Junction of Western Avenue and River Street, Ward 4.*

WILLIAM EWELL,	<i>Foreman.</i>
DANIEL R. MELCHER,	<i>1st Assistant Foreman.</i>
JAMES HENRY,	<i>2d " "</i>
CHARLES EMERSON,	<i>Clerk.</i>
WILLIAM DOLAN,	<i>Steward.</i>

William Norris,	John Jenness,
Thomas Dolan,	Albert Norris,
William H. Jenness,	James A. Reid,
Lewis P. Jenness,	S. L. Wentworth,
Samuel Ham,	John Costello,
William Freeman,	Andrew J. Ayers,
William E. Cole,	Thomas Cowdry,
Michael Griffin,	Samuel W. Jenness,
George Batchelder,	Ezra N. Jones,
Anthony Griffin,	Lewis C. Clark,
Augustus P. Hanson,	Charles F. Sweet,
J. B. Smithers,	John S. Carrol,
James S. Cole,	Benjamin F. Watts,
Joseph Pierce,	John G. Hicks.

Condition of House and Apparatus.

House, Engine, 22 feet of Suction Hose, 2 Buckets, 1 Pipe, 1 Blunderbuss, 3 Axes, Hose Carriage, 175 feet 2½-inch Leather Hose, 700 feet of 2-inch in good condition, 300 feet ordinary.

Engine built by Hunneman & Co. It is of their most improved pattern, stern suction, outlets for two streams, 5½-inch cylinders, and rests on springs.

Daniel Webster Engine Company, No. 5.*House on North Avenue, near Shepard School-house, Ward 5.*

DANIEL O'CONNELL,	<i>Foreman.</i>
HENRY K. PARSONS,	<i>1st Assistant Foreman.</i>
FRANK COOK,	<i>2d " "</i>
LEVI D. HALL,	<i>Clerk.</i>
FRANCIS H. WHITE,	<i>Steward.</i>

E. Griffin,	S. M. Parsons,
John F. Rice,	W. Coleman,
Geo. W. Hunt,	Frederick A. Gerry,
A. E. Long,	A. D. Morse,
Geo. Cutter,	Augustus Sproul,
E. P. Henderson,	William Bryant,
Henry Muller,	Charles Sanborn,
Charles Marston,	William Friend,
William Nevil,	Samuel Thompson,
D. D. Claffin,	Francis Mason,
Chas. W. Parkhurst,	James Cary,
Christian Muller,	Wm. T. Henderson,
Edward Boardman,	Matthew Persell,
James Wakefield,	Edward Gilman.

Condition of House and Apparatus.

House, Engine, 27 feet of Suction Hose, 4 Buckets, 1 Pipe, 2 Axes, 1 Blunderbuss, Hose Carriage, 200 feet 2½-inch single-riveted Hose, 350 feet 2-inch in good condition, 1 Hose Carriage, 500 feet 2-inch Hose, ordinary. Engine built by Howard & Davis.

Hand Engine No. 2 and Hose Carriage are stored in Pioneer Engine House, and kept for relief purposes. Hand Engine No. 3 and Hose Carriage are in a building connected with the N. E. Glass Works.

Franklin Hook and Ladder Company, No. 1.*House on Main, near Windsor, Ward 4.*

DANIEL E. FRASIER,	<i>Foreman.</i>
JACKSON E. HALL,	<i>1st Assistant Foreman.</i>
THOMAS DRINAN,	<i>2d “ “</i>
JAMES P. EWELL,	<i>Steward.</i>

Israel Woodbury,	E. A. Hall,
William Mason,	Geo. Tower,
Alonzo Colby,	John Wentworth,
Albert March,	S. A. Hatfield,
Martin Cheney,	James R. Bowdley,
Cyrus Chapman,	Geo. C. Daniels,
David W. Hill,	Elias Jones.
Chas. E. Warren,	

Condition of House and Apparatus.

House, Carriage, 17 Ladders of various lengths, from 10 to 36 feet, 1 Splice Ladder 52 feet in length, 3 Guy Ropes, 8 Buckets, 3 large Fire Hooks with chain and rope attached, 2 small Hand Hooks with poles, 4 Chain Dogs, 4 Fire Rakes, 7 Pitchforks, 4 Axes, 6 Crotch Poles, 1 Crow-bar, 1 Saw, 2 Harnesses, 1 Wrench to Reservoir supply pipes, 1 Horse, in good condition.

The Horse formerly in service on No. 3 Steamer has been at work on the City Farm for several months, and has so far recovered as to be serviceable in the Fire Department if required.

One long Ladder is kept in a shed attached to the fence in the yard of the First Methodist Society, Third Street, Ward 3, also a Fire Hook, the rope to which is kept in No. 3 Engine House.

Two Ladders, one of 35 feet and one of 26, together with a large Fire Hook, are kept in a shed attached to Daniel Webster Engine House in Ward 5. The rope to the Hook is kept in said house.

In addition to the articles herein described, the Companies are furnished with the requisite number of Badges, Keys, Fire Hats, Belts and Spanners, Signal Lanterns, Hand Lanterns, Crow-bars,

Hydrant Wrenches, Goose-necks, Reducing Couplings, and all the necessary apparatus for use in the performance of their respective duties.

Fire Police.

George S. Pike, Ward 2.

Hunneman Engine Company, No. 7.

House on Church Street, Ward 1.

JAMES P. WALLACE, JR., *Foreman.*

The duties of this Company are confined more particularly to the Ward, but they render assistance in other parts of the City when required. They receive \$ 240 per year, to defray incidental expenses and salary of steward, and \$ 8 per hour for services rendered. The Company comprises forty-one members, and is useful in this locality.

The Apparatus in their charge, Engine, Hose Carriage, 875 feet 2½-inch Leather Hose, is in good condition.

RESERVOIRS.

A star [*] indicates those furnished with supply pipe.

LOCATED IN WARD ONE.

Corner Main and Dana streets.	Square, front of house of late Dr. Holmes.
Mt. Auburn street, foot of Linden street.	Kirkland, opposite Oxford street.
* " " opposite Orthodox Church.	Sumner street, opposite residence of Mr. Lerner.
* Corner Brighton and Eliot streets.	Cambridge street, nearly opposite Sumner street.
Brattle street, south end Appian Way.	Prescott street, near J. D. Green's barn.
Garden street, north " " "	Bow street, centre of Square.
* Junction Garden street and Concord Av., opposite Arsenal.	College Yard.
North Avenue, near junction Water-house street.	

LOCATED IN WARD TWO.

* Junction Main street and Broadway.	* Prospect street, 175 feet north of Broadway.
Pioneer street, front of School-house.	* Norfolk street, midway between Broadway and Hampshire street.
* Corner Harvard and Davis streets.	* Corner Harvard and Columbia streets.
* Broadway, corner of Windsor street.	* Austin st., between Temple and Inman.
Corner Washington and Windsor streets.	* Corner Inman and Harvard streets.
* Harvard street, head of Cherry.	* Corner Clark and Hampshire streets.
* Harvard street, opposite Burial-Ground.	* Corner Webster Ave. and Cambridge sts.
* Corner Harvard and Prospect streets.	* Corner Tremont and Gardner streets.
Corner Essex and Austin streets.	Corner Washington and Cherry streets.
Corner Main and Hancock streets.	
Broadway, head of Tremont street.	

LOCATED IN WARD THREE.

* Front of Hotel, junction Bridge and Gore streets.	* Corner Otis and Fourth streets.
* Corner Gore and North Third streets.	Corner Cambridge and South Fifth streets.
* Cambridge street, 70 feet east of Third street.	* Corner Thorndike and Third streets.
Corner South Sixth and Spring streets.	New England Glass Co.'s Yard.
Under N. England Glass Co.'s Building.	Winchester's Factory Yard.
	Under Lowell R. R. Machine Shop.

LOCATED IN WARD FOUR.

* Corner Washington and Harrison sts.	* Corner Main and Brookline streets.
East end of School street, near Brooks's Buildings.	* Corner Austin and Douglass streets.
Main street, 50 feet west of Car Factory.	* Pearl street, near Jones & Co.'s Factory.
Main street, near Hovey's Bacon Works.	* Main street, junction of Western Avenue and River street.
Corner School and Cherry streets.	Corner Main and Austin streets.
Corner Brookline and Auburn streets.	Green street, opposite house of Daniel Stone.
Corner Pearl and Franklin streets.	Main street, east side of D. Osborn's Factory.
* Junction Western Avenue and Pleasant street.	Corner Washington and Pine streets.
* Corner Magazine and Williams streets.	
Main street, near Liberty Pole.	

LOCATED IN WARD FIVE.

In Square opposite Porter's Hotel.	North Avenue, near Engine House No. 5.
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HYDRANTS.

A star [*] indicates 3-inch hydrants.

LOCATED IN WARD ONE.

On Brattle street, opp. the line between Messrs. Longfellow and Hastings.	Corner Mt. Auburn and Brighton streets.
Corner Brattle and Ash streets.	“ Mt. Auburn and Howard streets.
“ Brattle and Hilliard streets.	“ Dunster and South streets.
On Brattle st., cor. Brattle House estate.	On Kirkland st., opp. Divinity Hall Av.
On Harvard street, opp. Harvard Block.	On Oxford street.
Junction of Main and Harvard streets.	Corner North Avenue and Shepard st.
Corner Main and Trowbridge streets.	Between the rails of R. R. track, in front of Lyceum Hall.
“ Harvard and Remington streets.	Corner Phillips place and Berkeley st.
On Cambridge st., front Scientific School.	Craigie, near corner Sparks street.
Corner Cambridge and Sumner streets.	* Corner Brattle and Lowell streets.
“ N. Avenue and Chauncy street.	* Junction Broadway and Cambridge st.
Mt. Auburn, opposite McClellan street.	* Corner Broadway and Prescott street.
Corner Cambridge and Baldwin streets.	* “ “ and Trowbridge st.
* Corner Appleton and Highland streets.	* Concord Avenue, opposite Craigie street.
“ Church and Palmer streets.	* Corner Broadway and Quiney street.
“ Garden and Mason streets.	* “ “ and Ware street.
Junction Waterhouse street and Concord Avenue.	* “ “ and Ellery street.

LOCATED IN WARD TWO.

Corner Main and Lee streets.	On Prospect street, opp. B. Tilton's.
“ Main and Hancock streets.	Corner Prospect street and Broadway.
On Moore, head of Hastings street.	“ Prospect and Hampshire streets.
Corner Washington and Clark streets.	“ Norfolk and Hampshire streets.
“ Harvard and Clark streets.	On Tremont street, near Wellington's House.
On Norfolk st., head of Washington st.	Main, corner of Doek street.
On Essex street, westerly side, midway between Harvard and Austin streets.	Corner Market and Union streets.
On Cambridge street, north side, near junction of Hampshire and Cambridge streets.	* Corner Broadway and Dana street.
On Main, opposite Pleasant street.	* “ “ and Ellsworth Ave.
Corner Main and Essex streets.	* “ “ and Fayette street.
“ Windsor and Lincoln streets.	* “ “ and Amory street.
“ Windsor and Hampshire streets.	* “ “ and Norfolk street.
On Cambridge street, cor. Willow place.	* “ “ and Boardman street.
On Cambridge street, opposite the head of Maple Avenue.	Broadway, opposite Tucker's Factory.
Corner Broadway and Davis street.	* Centre street, opp. Dana School-house.
“ Harvard and Hancock streets.	* Corner Broadway and Hancock street.
“ Harvard and Dana streets.	* “ “ and Antrim street.
“ Columbia and Washington sts.	* “ “ and Tremont street.
	* “ “ and Elm street.
	* Junction Broadway and Hampshire st.
	* Corner Broadway and Doek street.

LOCATED IN WARD THREE.

Corner Cambridge and Sixth streets.	Corner Fifth and Gore streets.
“ “ and Third streets.	“ Second and Otis streets.
Junction Cambridge and Bridge streets.	On Bridge street, opposite Bay State
On Bridge street, opposite Wellington's	Glass House.
counting-room.	Corner Otis and Seventh streets.
On North street, near Glass Co.'s cutting-	“ Thorndike and Sixth streets.
shop.	“ Thorndike and Fifth streets.
On Bridge street, south side, opposite	“ Gore and Fourth streets.
the head of Water street.	“ Spring and Fourth streets.
Corner Third and Vine streets.	* “ Otis and First streets.
“ Cambridge st. and Franklin alley.	

LOCATED IN WARD FOUR.

Corner Main and Columbia streets.	Corner River and Franklin streets.
Near Junction of Main and Austin sts.	“ Pearl and Cottage streets.
Corner Main and Windsor streets.	“ Pearl and Anburn streets.
Junction of Front and State streets.	“ Brookline and Franklin streets.
On Washington street, near east end.	On Main street, north side, opposite
On Main street, opp. Brooks's Buildings.	Kennedy's Bakery.
On River, opposite Cottage street.	Foot of School street.
On River, opposite Harrison Avenue.	Magazine, near Short street.
Corner Western Av. and Jay street.	Corner Main and Norfolk streets.

LOCATED IN WARD FIVE.

Between rails of railroad, opposite office	* North Avenue, corner Coggswell Avenue.
door.	* Corner Linnaean and Avon streets.
On North Avenue, opp. Linnaean street.	* “ “ and Bowdoin streets.
* On North Avenue, cor. Chester street.	* “ North Avenue and Allen street.
* Garden, opposite Bond street.	* “ “ “ and Willow street.
* Corner North Av. and Arlington street.	“ “ “ and Rice street.
* North Avenue, near Gerry's Saloon.	

FIRES AND ALARMS FROM DECEMBER 18, 1866, TO DECEMBER 18, 1867.

Date.	Owner or Occupant.	Description.	Situation.	Loss.	Insurance.	Causes.
1866. Dec. 19	N. P. Brooks,	Boarding-house, Alarm,	Junction Gore and Bridge Streets, Somerville,	Trifling,		Fire in Somerville.
" 31						
1867. Jan. 9	James M. Cutter,	Dwelling-house,	Corner Hancock St. and Broadway,	Trifling,		Defective hearth under coal grate.
Feb. 5	A. H. Stevens,	Barn,	Bridge Street,	"		Sparks from locomotive.
" 6	E. Hixon,	Dwelling-house,	Harvard Street,	"		Unknown.
" 7	Mary Granger,	"	Bridge Street,			Sparks from chimney.
" 10		Alarm,	Charlestown,			Fire in Charlestown.
March 10		"	Somerville,			Fire in Somerville.
April 4	Charles Filloil,	Barn,	Magazine Street,	\$ 600	\$ 600	Incendiary.
" 9	Margaret McLane,	Dwelling-house,	Brighton Street,	50	50	Defective chimney.
May 20	Charles W. Munroe,	Planing-mill,	First Street,	Trifling,		Shavings took fire from furnace.
June 7		Alarm,	Somerville,			Fire in Somerville.
" 18	Sam'l F. Woodbridge,	Dwelling-house,	North Avenue,	1,000	1,000	Unknown.
July 7	Z. L. Raymond,	Two dwelling-houses,	Ellery Street,	6,000	3,800	Set by two boys at play.
" 9		Alarm,	Charlestown,			Fire in Charlestown.
" 9	Fruit-preserving Co.,	Fruit-preserving building,	Main Street,	Trifling,		Took from furnace.
Sept. 5	J. C. Chase,	Dwelling-house,	Columbia Street,	150	150	Rats gnawing matches.
" 25		Sparks from chimney,	Dock Street,			Sparks from chimney of foundry.
" 26		Coal shed,	Main Street, L. P.,			Sparks set roof on fire.
" 27	T. P. Lerner,	Alarm,	Brighton,	Trifling,		Fire in Brighton.
Oct. 15	Patrick Gillan,	Dwelling-house,	Vine Street,	Trifling,		Defect in chimney.
" 24	Charles Foster,	Bakery and dwelling,	Norfolk Street,	6,300	6,300	Wood in oven took fire.
" 24	Mason Davis,	Dwelling-house,	"	1,266	1,266	
Nov. 22		Alarm,	Woburn,			Fire in Woburn.
" 25	Meyers & Co.,	Picture-frame manufactory,	Cambridge Street, Ward III.,			Took from friction.
" 30	William Muller,	Dwelling-house,	Tannery Street,	Trifling,	2,100	
Dec. 16		False alarm,	Ward I.,	2,300		False alarm.
				\$17,666	\$15,266	

RECAPITULATION.

Number of	Engineers, ...	5
"	" Members, ...	126
"	" Fire Police, ...	1
"	" Steam Fire Engines, ...	3
"	" Hand " "	5
"	" Horses, ...	11
"	" Horse Hose Carriages, ...	3
"	" Hand " "	6
"	" Feet of Suction Hose, ...	209
"	" Buckets, ...	23
"	" Pipes, ...	9
"	" Axes, ...	11
"	" Feet of Leading Hose, ...	7,975
"	" Hook and Ladder Carriages, ...	1
"	" Ladders, ...	20
"	" Large Hooks, with chain and rope attached, ...	5
"	" Hand Hooks, with poles, ...	4
"	" Crotch Poles, ...	6
"	" Fire Rakes, ...	4
"	" Pitchforks, ...	7
"	" Fire Hats, ...	82
"	" Reservoirs, ...	66
"	" Hydrants, ...	118
"	" Alarms from Fires in City, ...	17
"	" " " " out of City, ...	7
"	" " " " other causes, ...	2
		— 26
Loss on Buildings and Stock, ...		\$ 17,666
Insurance " " "		15,266

In Board of Aldermen, December 18, 1867.

Accepted, and ordered to be printed with the next City documents.

Sent down for concurrence.

Attest :

JUSTIN A. JACOBS, *City Clerk.*

In Common Council, December 28, 1867.

Concurred.

Attest :

JOS. G. HOLT, *Clerk.*

REPORT

OF

GEORGE L. CADE,

SUPERINTENDENT OF STREETS AND DRAINS.

CITY OF CAMBRIDGE, December 11, 1867.

To the Honorable City Council:

I RESPECTFULLY ask leave to submit for your consideration my Fourth Annual

REPORT.

STREETS AND PAVING.

The appropriation for streets and paving, for the

financial year ending November 30, 1867, was	. \$ 40,000.00
Additional appropriation, ...	400.00

Total appropriation, ...	. \$ 40,400.00
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Expended, ...	40,385.56
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Balance unexpended, ...	\$ 14.44
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Amount received and paid to Treasurer, ...	\$ 1,010.00
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The streets of the City, with but few exceptions, considering the great amount of rain we have had during the past season, are in a very fair condition. There has been more improvement made in the general condition of the streets and sidewalks during the past year than has ever been made in any one year since we have been a City. In the First and Fifth Wards, upon Garden Street and North Avenue, the improvements have been

very great ; upwards of twelve thousand dollars have been expended upon these two streets alone, being nearly one third of the whole appropriation for streets and paving for the year. I have had a large force almost constantly employed, from April to December, in paving and setting edge-stone. There have been upwards of fifteen thousand feet of edge-stone set, and over sixteen thousand yards of paving done, during the past season, which is about twice as much paving as has ever before been done by the City in any one year. Of course this kind of labor requires a vast amount of teaming to furnish gravel and stone, and I have been obliged to hire teams more than ever before. There have been expended for teaming stone and gravel over ten thousand dollars during the past year ; and in order to keep at all within my appropriation, I have been obliged to employ my street force on sewers instead of on streets. This should not be, but, unless more money is appropriated for this department, the streets cannot be kept in as satisfactory condition as the citizens expect and demand. In the City of Cambridge there are at least one hundred and fifty miles of streets to be taken care of, and the public are not satisfied to have them in the same condition in which they were of necessity seven or eight years ago. Our City is growing very fast ; new streets are being made in the Second, Fourth, and Fifth Wards, building of new houses is constantly going on, and the public demand that they should have good streets and sidewalks, and I know of scarcely anything that will attract people to our City so much as good walks and streets ; but they cannot be had without money. Forty thousand dollars are insufficient to do all this as it should be done, when we spend twelve thousand upon a small portion of two streets in a single season. I am pleased to say, that, since my connection with this department, I have displaced all the plank sidewalks in the City, with but one exception, which is upon Prison Point Bridge, and that has all been rebuilt during the past year. Owing to the immense amount of digging up of the streets during the past season for water and gas pipes, I fear that the coming spring will find some of our streets in a very bad condition. From the sudden setting in of the winter season, I have been prevented from making several im-

provements in the way of brick sidewalks, edge-stones, and crossings, that were to have been partially paid for by private citizens. Experience has taught me that it would be much cheaper for the City to commence and pave a portion each year of Cambridge, Bridge, and Main Streets, and also the street leading over Prison Point Bridge, which is not in such a condition as I would wish to see it, but scarcely anything can be done to it as at present constructed. There are no less than ten or twelve railroad tracks constructed across this road without any provision being made for drainage. Most of them are so laid that it is impossible to get any surface drainage at all; and what must of necessity be the condition of a road where all the rain and snow that fall upon it remains until it can soak away or dry up, and that too upon a macadamized road, almost impervious to water? This street should, during the coming season, have a sewer constructed from Bridge Street, running in a northerly direction about six hundred feet, and then the street should be paved. The heavy travel upon this street in its present condition makes it an impossibility to keep it in good repair. Bridge Street in this immediate vicinity will require in the coming season considerable repairs in the way of resetting edge-stones and repaving.

In conclusion, I earnestly urge upon the City Council the necessity of purchasing a lot of marsh land between the Second and Third Wards, to be filled up with the ashes and other rubbish that may be collected in that vicinity. I know that in the end it would be of great benefit to the City, as we could make a valuable piece of land at a comparatively small expense. We need such a lot of land for storage of gravel and stone on the line of the Grand Junction Railroad. The day is not far distant when all of our gravel for streets will have to be brought in on this road.

I would also recommend the leasing of a wharf at the Lower Port for the purpose of landing and storing our edge-stone, block, and paving stone, which can be done at a great saving of expense, as they can then be purchased by the cargo at first cost.

BRIDGES.

The appropriation for bridges, for the financial year	
ending November 30, 1867, was	\$ 10,500.00
Expended, ...	7,698.77
Balance unexpended, ...	\$ 2,801.23

Amount received and paid to Treasurer, for rents, &c. \$ 661.00

The several bridges of the City, with the exception of West Boston Bridge, are in good repair ; several improvements have been suggested for this bridge and draw, during the past season, by different engineers, the most important of which seems to be on the draw. A new draw will have to be constructed the coming season, at a cost of not less than fifteen thousand dollars, and considerable repaving will also have to be done on the bridge. And I would here suggest for your consideration the importance of removing the sidewalk on the southerly side, and having both railroad tracks removed to the northerly side, which will give a drive of sufficient width for three carriages to pass abreast, and then of repaving the south side with the Improved Stafford Pavement.

This pavement is constructed of blocks standing on the grain, which are firmly held together and in place by double-dove-tailed white-oak keys driven both transversely and longitudinally through the sections in a groove cut in the blocks, thus forming a compact framed mass of the greatest possible solidity, which becomes one piece of the dimensions of two by three feet. Grooves of three inches depth, three quarters of an inch wide, are then sawed in the sections at intervals of four inches. These sections are then placed in a tank where they are treated with a *mixture of crude creosote, and resinous oils*, until the whole fibre of the wood is saturated with it, the water and air in the cells of the wood having been first expelled by a simple and economical process.

It is then ready for the street. Stringers two and one half inches thick and six inches wide are treated in the same manner, as a bearing for the end sections. The work of laying is

performed as follows: The street is first excavated to the necessary depth to allow a bed of four inches of sand; the stringers are then bedded into the sand and tamped solidly in place, across the street, so that their surface shall be level with the surface of the earth. They are laid three feet apart from centre to centre, and consequently allow an end bearing for the sections of three inches each; the sections are so laid as to break joints with each other. The gutter is formed by a higher row of blocks, and next the curbstone, which slopes down to the grade of the street. The cells are well tamped with coal-tar and gravel. The section then rests flat upon the earth and upon the stringers as well. Its advantages over all other kinds of pavement, including the Nicholson, are many, among which are the manufacturing of the sections, the work being done at the mill. Being framed together, and composed of large masses, expansion and contraction are absolutely prevented. In case any repairs should be necessary, screw bolts can be inserted into a section, a bar and chain attached to a jack, and the section is removed without the slightest injury to it. Experience has shown that wooden pavement will last longer and is more durable than stone, when it is properly laid; this has been tested by laying blocks of stone and wood alternately, and the stone was found to wear more rapidly than the wood. I would again earnestly request the City to give this pavement a trial, if not for this whole bridge. I would request permission to lay a piece in front of the City Hall, so that it may be tested to your satisfaction.

SCHEDULE OF PERSONAL PROPERTY BELONGING TO STREET DEPARTMENT.

Fourteen horses,		\$ 4,550.00
Fourteen cart harnesses,		390.00
Ten carts,		500.00
One wagon and harness,		75.00
One wagon,		250.00
Four sleds,		300.00
One stone-roller,		75.00
Amount carried forward,		\$ 6,140.00

Amount brought forward,	\$ 6,140.00
One plough, ...	10.00
Utensils for work on streets and drains, ...	250.00
Stable furniture, ...	100.00
Stone-crusher and steam-engine, ...	3,000.00
Nine snow-ploughs, ...	90.00
	\$ 9,590.00

Respectfully submitted,

GEORGE L. CADE,
Superintendent of Streets.

RESERVOIRS AND DRAINS.

THE appropriation for the above purposes, for the financial year ending November 30, 1867, was .	\$ 6,000.00
Additional appropriation transferred from bridges,	1,000.00
Total appropriation, ...	\$ 7,000.00
Expended, ...	6,992.07
Balance unexpended, ...	\$ 7.93
Cash received and paid to Treasurer, ...	\$ 25.00

The following is a list of the Drains constructed the past season, with their length, capacity, and cost: —

COLUMBIA STREET FROM BROADWAY, SOUTHERLY.

260 feet long ; size, 8-inch drain pipe. Cost, . . . \$ 170.64

EXTENSION OF SEWER IN WINDSOR STREET SOUTHERLY.

179 feet long ; size, 13×15 inches. Cost, . . . \$ 216.42
Depth at terminus, 7 feet 3 inches.

EXTENSION OF NORFOLK STREET SEWER SOUTHERLY TO CENTRE OF CAMBRIDGE STREET.

Size, 17×19 inches ; length 80 feet. Cost, . . . \$ 137.25
Depth at terminus, 9 feet 5 inches.

EXTENSION OF WASHINGTON STREET SEWER WESTERLY FROM COLUMBIA EXTENSION TOWARDS NORFOLK STREET.

150 feet long ; size, 13×15 inches. Cost, . . \$174.75
Depth at terminus, 5 feet 10 inches.

EXTENSION OF AMORY SEWER SOUTHERLY TO NEAR BROADWAY.

377 feet long ; size, 13×15 inches, and 12×13 inches.
Cost, ... \$393.60
Depth at terminus, 5 feet 6½ inches.

EXTENSION OF CRAIGIE STREET SEWER.

162 feet long ; size, 15×17 inches. Cost, . . \$236.95
Depth at terminus, 7 feet 10 inches.

GORE STREET SEWER AND BRANCH IN SIXTH STREET.

1059½ feet long in Gore Street ; size, 15×17 inches ;
depth at terminus, 100 feet west of Fifth Street,
6 feet 10 inches. Branch in Sixth Street, 133 feet
long ; size, 13 inches ; depth at terminus, 100 feet
north of Cambridge Street, 6 feet 5 inches. Whole
cost, ... \$1,965.69

NORFOLK AND HARVARD STREET SEWER.

763 feet long ; size from Broadway to Harvard
Street, 13×15 inches ; size from Norfolk to Essex
Street, 24×30 inches ; depth at terminus, 5 feet 10
inches. Cost, ... \$1,247.66
Whole amount expended on new drains, . . 4,542.96
Deduct for covering stone furnished, . . . 692.63

Total drawn from Treasury for new Drains, .	\$3,850.33
Expended on Drains previously constructed, and on Reservoirs, ...	3,141.74
Total expenditures, ...	\$6,992.07

I would here call the attention of the City Council to the amount that will actually be drawn from the Treasury for new

Drains the past season out of an appropriation of nearly seven thousand dollars, after deducting what has been assessed.

Whole amount drawn for new Drains, . . .	\$ 3,850.33
. Deduct amount assessed on abutters, . . .	2,887.75
Whole expense to City for new Drains for 1867, .	\$ 962.58

I would therefore respectfully ask that the appropriation for Reservoirs and Drains for 1868 be not less than twelve thousand dollars. I would also again urge upon the City Council the necessity of constructing a Common Sewer in Western Avenue. It was laid over this year, principally for the want of funds. The Committee were unanimously in favor of it, but reported against constructing it this season on account of a lack of means.

Respectfully submitted,

GEORGE L. CADE,

Superintendent of Drains.

In Board of Aldermen, December 11, 1867.

The foregoing reports are accepted and ordered to be printed with the next City documents.

Sent down for concurrence.

Attest :

JUSTIN A. JACOBS, *City Clerk.*

In Common Council, December 17, 1867.

Concurred.

Attest :

JOS. G. HOLT, *Clerk.*

R E P O R T

OF

THE CHIEF OF POLICE.

OFFICE OF CHIEF OF POLICE,
Cambridge, December, 1867.

To the Honorable the Mayor and Aldermen of the City of Cambridge :

GENTLEMEN :— In accordance with custom, I have the honor to submit my fourth Annual Report, comprising a synopsis of the doings of the Department for the municipal year ending November 30, 1867.

Whole number of arrests during the year,	.	.	1,170
Males,	.	.	1,009
Females,	.	.	161
Residents,	.	.	832
Non-residents,	.	.	338
Adults,	.	.	978
Minors,	.	.	192
Whole number of lodgers during the year,	.	.	1,006
Males,	.	.	861
Females,	.	.	145
Total number,	.	.	2,176

The arrests were made for the following offences :—

Adultery,	.	.	.	.	.	4
Arson,	.	.	.	.	.	4
Assault and battery,	.	.	.	.	.	137
Assault on officers,	.	.	.	.	.	4
Attempt to rescue,	.	.	.	.	.	1

Bastardy, ...	9
Breaking and entering, ...	8
Crime against nature, ...	1
Common drunkards, ...	22
Common beggars, ...	4
Cruelty to animals, ...	1
Contempt of court, ...	1
Drunkenness, ...	428
Disturbing peace, ...	94
Disturbing religious meeting, ...	5
Disturbing public schools, ...	3
Escaped convicts, ...	19
Habitual absentees from school, ...	16
Insanity, ...	20
Indecent exposure of person, ...	1
Keeping unlicensed dogs, ...	14
Keeping liquor nuisance, ...	8
Keeping disorderly house, ...	1
Larceny, ...	119
Lewdness, ...	1
Malicious mischief, ...	28
Obtaining money under false pretences, ...	2
Obstructing horse-cars, ...	8
Perjury, ...	1
Peddling without license, ...	9
Receiving stolen property, ...	3
Refusing to pay car fare, ...	1
Surety of peace, ...	17
Suspicious persons, ...	4
Stubborn and ungovernable, ...	13
Surrendered by bail, ...	1
Violation of Lord's day, ...	37
Violation of City ordinance, ...	81
Vagrancy, ...	38
Wilful trespass, ...	2

The number of arrests is less by 117 than for the previous year. This is caused by arrests being made by the State

Constabulary and reported to the Chief Constable, where formerly all arrests were made by the local police, and reported at this office.

There is a diminution in the number of minors arrested, notwithstanding the rapid increase of our population. The appointment of truant officers, who visit every school twice daily, does very much to lessen juvenile misdemeanors. The services of these officers, so far as I am informed, gives general satisfaction to teachers and parents. I regard their services as invaluable.

Experience has taught those engaged in police duties in our large cities that intemperance, though regarded as a crime against society, cannot be remedied by imprisonment. The unfortunate man who cannot control his thirst for liquor indulges to excess, and is removed from society to the confinement of a correctional institution ; but, upon his return, he again indulges his appetite, and again is in the hands of the Police.

During the year, Rev. William R. Stone was appointed agent of the "Sanders Temperance Fund," and has attended particularly to all cases of simple drunkenness, by visiting the lock-ups and Police Court for the purpose, if possible, of saving the parties there found from a second commitment, and endeavoring by mild and moral means to reform them, to give them wholesome counsel and advice, to solicit their names to the temperance pledge, to look after their families, and make them good citizens rather than allow them to become paupers. The report of this officer, showing the result of his labor, will be submitted to the City Council.

I have discharged 162 persons without entering complaints against them, some of which were taken in charge by Rev. Mr. Stone, others were cases in which circumstances and sympathy seemed fully to justify such a course.

Full and perfect records are kept at this office of all arrests made by the Police, and of the disposition made of each case, which record is open for the inspection of our citizens.

A roll-book of the Police is kept at the office of the Chief, giving the name of each man, the station to which he belongs, and the number of the badge worn by him.

The Department is in good condition. Little is wanted except discipline. It has at no time been better. Yet no year has

closed since my connection with it without some changes in the members of the force having been made. I cannot but believe that the appointment of patrol police during good behavior, removable at the pleasure of the Mayor, would be a wise and judicious measure.

In my first Annual Report I had the honor to submit my views in relation to a uniform style of dress for the Police. In my second Annual Report I again brought the subject to the attention of the City Council; and now, at the close of my fourth year of service in the Department, I am fully convinced that, if the measure was adopted, it would promote the discipline, elevate the character, and improve the general condition of the Department more than any other matter connected with the Police since its organization.

When I entered upon the duties of Chief of Police, the number of men was twenty-one. The force has been increased from time to time, as the wants of the City seemed to require, until it has reached the present number of thirty-one, which number I think amply sufficient for all ordinary purposes. The office business has also kept pace with the numerical increase of the force.

The force is so organized in its working, that, with proper fidelity on the part of the men, the public may well feel all the security against the casualties of city life which can reasonably be expected, and that protection of life and property which can reasonably be demanded of the Police.

Respectfully submitted,

FORDYCE M. STIMSON,
Chief of Police.

In Board of Aldermen, December 18, 1867.

Accepted and ordered to be printed with the next City documents. Sent down for concurrence.

Attest: JUSTIN A. JACOBS, *City Clerk.*

In Common Council, December 28, 1867.

Concurred.

Attest: JOS. G. HOLT, *Clerk.*

R E P O R T

OF

R O L A N D L I T C H F I E L D ,

SUPERINTENDENT OF LAMPS.

To his Honor the Mayor and Board of Aldermen of the City of Cambridge :

GENTLEMEN : — I herewith submit my Annual Report in relation to the Lamp Department.

The number of Street Lamps is as follows :

District One,	179	Gas,	6	Fluid.	
“ Two,	197	“	59	“	
“ Three,	69	“	42	“	
	445		107	Total,	. . 552

Thirty-seven of the above were added during the year.

The following is an exhibit of the expenses of the Street Lamps for the year : —

For Gas and excise duty,		\$ 6,788.69
“ Lighting,		2,701.12
“ Fixtures and repairs,		865.94
“ Naphtha, matches, and wicking,		455.09
“ Glass, putty, &c.,		275.11
“ Salary of Superintendent,		200.00
		\$ 11,285.95

The average cost for each lamp, burning gas through the year, was seven and one quarter cents per night ; and the average cost

of each lamp burning naphtha, was one cent and eight mills per night.

Six men are employed to light the lamps and keep the lanterns clean ; five of them are paid forty-two cents per month for each lamp ; and the one that lights the lamps on West Boston Bridge is paid two shillings per month for each lamp.

It would be a great improvement if the Causeway and Bridges were lighted with gas.

Respectfully submitted,

ROLAND LITCHFIELD,
Superintendent of Lamps.

CAMBRIDGE, December 1, 1867.

In Board of Aldermen, December 4, 1867.

Accepted and ordered to be printed with the next City documents.

. Attest :

JUSTIN A. JACOBS, *City Clerk.*

REPORT

OF

THE CITY ENGINEER.

OFFICE OF CITY ENGINEER, December 1, 1867.

To the City Council :

GENTLEMEN : — As required by ordinance, the following first Annual Report of the City Engineer and Surveyor is herein respectfully presented.

The brief interval since my appointment in September last has been occupied with answering the requirements of Committees of the City Council, the Cemetery Commissioners, furnishing lines and levels to the Superintendent of Streets, surveys and plans of sewers as built this season, and a continuation of the survey of Main Street through North Avenue to Cambridge line, in compliance with the provisions of an order passed in Board of Aldermen, July 30th, and forming the basis for a general survey hereafter alluded to. No works of construction have been under my charge.

The Joint Committee on Roads and Bridges have directed some examinations of the West Boston Bridge draw, with reference to improvements upon the same. These examinations establish the character and condition of the draw as being too cumbersome and unwieldy, as well as very much out of repair. Its excessive weight and present mode of operation will always be a source of trouble, and expensive alterations will prove but a temporary relief for its defects. A lighter and narrower pivot bridge can be easily and rapidly operated, and thus meet the demands of public convenience. I recommend the building of a new structure, with advantages that cannot be attained by

repairing this one. If the work is undertaken while navigation is closed by ice, but little interruption of ordinary travel will occur.

Various plans have been furnished the Commissioners of the Cemetery. The improvement of the grounds this season has been very marked, and the whole Cemetery, both the old and more recent purchase, is so much more attractive in appearance as to justify warm commendation of the care and sound judgment of the Commissioners in charge, as well as the fidelity and good taste of the Superintendent. More than one hundred and fifty lots are now graded and nearly in readiness for sale, situated on different avenues and paths. They are of varying sizes, but generally contain 300 square feet each.

The survey of Main Street and North Avenue is designed to form a part of a regular system of surveys and levels which will be extended from time to time as opportunity occurs. Ultimately a complete, accurate, and detailed survey of the City will be obtained, mapped with such precision for record as to form the means for determining definitely the street limits. All angles or intersections in streets should be indicated by stone bounds or other fixed marks, and the grade of every street established. Such a comprehensive survey is required, especially as most of the older plans on file, belonging to the City, are deficient and inaccurate in the amount and character of the information they profess to contain. Encroachments upon the streets are very common in all parts of the City. Perplexing questions, sometimes terminating in litigation, are continually resulting from the absence of precise and authoritative determination of street lines and grades. Conclusive information needs to be accumulated, and made accessible to all. A general survey will be of paramount advantage to the City in its street improvements, the building of sewers, the laying of water and gas pipes, the construction of sidewalks, and will remotely benefit every builder and abutter. It may be made to include important data for the guidance of the Board of Assessors in preparing the annual taxation upon real estate. If these views meet the approval of the City Council, I desire that a committee may be authorized to examine the modes in which it is designed to continue the surveys and plans of City work, and preserve the records thereof.

Many of the sewers are of insufficient size and badly constructed. We labor under this great obstacle to perfect drainage,—general evenness of surface, and but slightly elevated above tide-water. During the prevalence of high tides our sewers necessarily become reservoirs to store the accumulating drainage held in check. Larger drains are therefore required than would otherwise be necessary, or receiving basins must be constructed near the outlets of some of the principal sewers. The expedient has hitherto been adopted, of connecting two drains of different outlets, partially to relieve the one most burdened. In 1863 one sewer was so aided at the expense of a second, and during the past season a still more pressing demand arising, a portion of the drainage from a third outlet has been made to discharge into the first, previously overtasked and relieved. The benefits of such changes in the direction of drainage matter are entirely of a temporary and uncertain nature, and a permanent remedy should, in some cases, be provided the coming season. In addition to extensions there should be constructed one or more main sewers and outlets of such dimensions as to answer all increasing demands. Such a main sewer should be built in Harvard Street, with a receiving basin and proper outlet. There is also a large section lying north of Cambridge Street and east from North Avenue, whose needs for drainage will soon become pressing, and the whole of North Cambridge is now insufficiently provided. The time is not far off when some more definite, general plan of drainage must be adopted, from sanitary, if not economical reasons.

Since the choice of City Engineer by the City Council, I have ever held myself in readiness to answer any requisition for services from the Water Board upon the extension of the works in progress or contemplation, but have received no intimation of a desire on their part for such co-operation.

I respectfully request that provision be made for an office for this Department, to allow of compliance with the provisions of the ordinance establishing the same, where the plans of the City may be made more accessible, and information relating to the streets, sewers, and public works of the City in its possession

may be conveniently attainable by the City officials or committees. The expenses of the Department from September 19th to date, exclusive of the salary of City Engineer, have been, for the services required of an assistant and man, \$162.71.

Respectfully submitted,

J. G. CHASE,
City Engineer and Surveyor.

CAMBRIDGE, December 1, 1867.

R E P O R T

OF THE

TRUSTEES OF THE DANA LIBRARY.

THE Trustees of the Dana Library, in submitting to the City Council the tenth Annual Report, are obliged to draw largely upon the Quarterly and Annual Reports of the Librarian, Miss Orne, for a full statement of the condition of the Library.

In the year now closed two hundred and eighty-eight books have been added to the Library; two hundred and thirty-two were purchased, and fifty-six have been presented:—By Hon. Henry Wilson, one; Hon. G. B. Upton, one; Mr. William V. Spencer, four; Mr. H. R. Harding, one; Dr. C. H. Allen, three; Hon. S. Hooper, three; Mr. Charles Deane, one; Mr. J. B. Wiggin, four; Mrs. S. B. Odiorne, twenty-nine; Miss Ann Cummings, six; Dr. W. W. Wellington, one; Mr. W. P. Atkinson, one; and Mr. John Coburn, one.

There were also received one pamphlet from Mr. William Rice; Catalogue and Report from the Holton Library, Brighton; twelve numbers of the National Portrait Gallery, from Miss Cummings; one pamphlet from Lieut. J. P. Richardson, and one from a friend.

The number of books given out was twelve thousand and fifty-eight, at an average of two hundred and forty-three per week; the greatest number in one day being one hundred and eighty-five, and in a week three hundred and twenty.

Two books have been lost from the Library, which leaves the whole number thirty-five hundred and eighty, exclusive of pamphlets and periodicals.

The losses from the Library since it was opened, ten years ago, have been very few, hardly averaging one a year. Lost books are usually promptly paid for, or replaced by the losers.

The fines incurred at the annual closing are generally pleasantly paid. A very few prefer to lose their privilege of taking books to paying the fine.

There has but one person — a lady — kept an unbroken subscription for the whole ten years, although many of the earliest recorded names are still on the list.

It will be necessary to take speedy measures for the publication of an Appendix to the Catalogue now in use, as many hundred books have been added since the latter was printed, and the inconvenience begins to be felt.

It will be necessary for the City Council to make larger appropriations for the increased expenses of the Library. We would suggest an annual appropriation of twelve hundred dollars, including the three hundred dollars obliged to be furnished under the Dana gift. The amount annually received for subscriptions, &c., being paid into the treasury, would leave the amount subject to the expenses of the Library not so large as would seem from the annexed statement of expenditures and receipts.

EXPENDITURES.

Librarian's salary, ...	\$ 225.00
Assistant's "	36.27
Books and stationery, ...	398.38
Binding books, ...	53.10
Printing, ...	9.00
Care of room and cleaning, ...	126.25
Rent of room (six months), ...	125.00
Gas, ...	31.92
Fuel, ...	14.85
Insurance, ...	20.00
Painting, ...	7.50
Stoves, ...	41.35
Gas-fixtures, ...	4.61
	————— \$ 1,093.23

Amounts received for

Subscriptions, ...	\$ 301.00
Fines, ...	15.75
Sale of Catalogues, ...	14.70
	\$ 331.45
Yearly appropriation, ...	300.00
	\$ 631.45

All of which is respectfully submitted,

EZRA PARMENTER,
W. W. WELLINGTON,
ANSON HOOKER,
CHARLES DEANE,
JABEZ A. SAWYER,
WILLIAM PAGE,

} Trustees
of the
Dana Library.

In Board of Aldermen, December 18, 1867.

Accepted, and ordered to be printed with the next City documents.

Sent down for concurrence.

Attest: JUSTIN A. JACOBS, *City Clerk.*

In Common Council, December 28, 1867.

Concurred.

Attest: JOS. G. HOLT, *Clerk.*

REPORT

OF THE

TRUSTEES OF THE DOWSE INSTITUTE.

To the Honorable City Council of Cambridge :

THE Board of Trustees of the Dowse Institute would respectfully report : —

The opening lecture of the course last winter was given by his Excellency Governor Bullock.

Lectures were also given by the following persons : —

Burt G. Wilder (two lectures),	A. A. Willits,
Jacob M. Manning,	Edwin H. Chapin,
George H. Hepworth,	George W. Curtis.

In addition, a Concert was given by the Mendelssohn Quintette Club ; two evenings were devoted to Readings, by Mr. and Mrs. E. L. Davenport and by Mr. George Vandenhoff.

The accompanying copy of the Annual Report of the Treasurer contains a statement of receipts and expenditures. The following is an abstract of said report : —

Dr.

To paid for lectures, concert, and readings, . . .	\$ 920.00
“ “ “ printing and advertising, . . .	37.50
“ “ “ care of hall, doorkeepers, &c., . . .	65.00
“ “ “ carriage hire, . . .	6.00
“ “ “ use of furniture, . . .	5.00
“ “ “ stationery, stamps, &c., . . .	5.00
“ balance to new account, . . .	138.51
	\$ 1,177.01

Cr.

By balance from last account,	.	.	.	.	.	\$ 27.01
“ interest, City of Cambridge,	.	.	.	.	.	600.00
“ sale of tickets,	.	.	.	.	.	550.00
						\$ 1,177.01

Respectfully submitted,

CHARLES DEANE,	}	<i>Board of Trustees.</i>
EZRA PARMENTER,		
W. W. WELLINGTON,		
JOHN C. DODGE,		
M. T. BIGELOW,		

CAMBRIDGE, December 31, 1867.

In Board of Aldermen, January 1, 1868.

Accepted, and ordered to be printed with the next City documents.

Sent down for concurrence.

Attest : JUSTIN A. JACOBS, *City Clerk.*

In Common Council, January 1, 1868.

Concurred.

Attest : JOS. G. HOLT, *Clerk.*

R E P O R T

OF THE

TRUSTEES OF THE SANDERS TEMPERANCE FUND.

IN compliance with an ordinance of the City, the Trustees of the "Sanders Fund" have the honor to submit their third Annual Report, for the financial year ending November 30, 1867.

For the year 1867 the interest on the fund bequeathed to the City of Cambridge by the late Charles Sanders has been applied, in accordance with his will, for the payment of a salary to a worthy man who has been constantly employed as a Missionary in the cause of Temperance.

The Trustees, at their quarterly meeting in April, appointed Rev. William R. Stone as Missionary; and from his constant and devoted attention to the trust reposed in him, they are confident that his labors have been productive of good results.

The Sanders fund of ten thousand dollars is invested in City Bonds bearing interest at six per cent. In conclusion, the Trustees indulge the hope that the act of the donor may not be without its influence in securing further material assistance to his benevolent purpose, that of "reforming old drunkards and preventing young drunkards, and abolishing as far as possible the use of all intoxicating articles."

The Report of the Missionary for the past year is hereto appended.

EZRA PARMENTER,	}	<i>Trustees of the "Sanders Fund."</i>
JOHN N. MERIAM,		
M. T. BIGELOW,		
K. S. CHAFFEE,		
L. S. LEARNED,		

REPORT OF REV. WM. R. STONE.

*To his Honor the Mayor and the Honorable Board of Trustees of the
 “ Sanders Temperance Fund.”*

THE undersigned would submit the following report : —

I received the appointment to the Mission about the 1st of May last. Having been engaged as Missionary to the poor for more than thirteen years and in seeking to reform the vicious and intemperate, the work was not new to me. The daily visits to the Police Court, which had been kept up by my predecessors, I resolved to continue ; and I have found, as they did, that much might be done there for the unfortunate, by becoming surety for those whose behavior warranted such a course, or advising and helping in any possible way the victims of strong drink, visiting the families of drunkards and aiding them pecuniarily. In the eight months in which I have been engaged in this Mission I have received the promise or pledge of two hundred and seventeen persons, of adult age and previous intemperate habits, that they would, with Divine aid, abstain from the use of intoxicating drinks. A majority of these, it is hoped, have faithfully kept their word, — and among them are some very gratifying instances of reformation, — while others have fallen out by the way. Among those confined in our County Prison, who are most of them committed for drunkenness or assault and other crimes committed under the influence of liquor, I have labored, and I trust with some success, to persuade men and women to renounce the vice of intemperance. The work of prevention has been aimed at and pursued by holding Temperance meetings, addressing Sabbath schools, procuring addresses from others, and distributing Temperance tracts and cards. I addressed a note to the pastors of churches in the City, requesting them to preach in aid of this cause. In my intercourse with the Judge of the Police Court, the Chief and members of the Police force, I have found them kind and courteous, and ever ready to afford me all the aid in their power. The Police of Cambridge are doing a great work of reform ; by their efforts the hideous vice of intemperance is greatly kept in check. After all, the work of

reforming drunkards is a slow and often discouraging work ; but with the blessing of God we have had some success, and it is only by His help we can hope to succeed in anything.

Very respectfully yours,

WILLIAM R. STONE.

CAMBRIDGE, December 26, 1867.

In Board of Aldermen, December 28, 1867.

Accepted and ordered to be printed with the next City documents.

Sent down for concurrence.

Attest :

JUSTIN A. JACOBS, *City Clerk.*

In Common Council, January 1, 1868.

Concurred.

Attest :

JOS. G. HOLT, *Clerk.*

R E P O R T

OF THE

C A M B R I D G E W A T E R B O A R D .

In compliance with an ordinance of the City, the Cambridge Water Board herewith present to the City Council their third

A N N U A L R E P O R T ,

Embracing a statement of the progress of the Works during the present year, their present condition, with an account of the receipts and expenditures, clearly demonstrating the fact that, notwithstanding the large expenditures which have been made the last two years, the Water Works are a self-sustaining institution.

The net cost of the Works, December 1, 1866, was \$ 355,126.12
 Expended for construction the pres-

ent year, ...	\$ 188,625.06	
Interest on Water debt, ...	27,984.00	
		216,609.06

Total, ...		\$ 571,735.18
Deduct excess of income over expense, ...		39,461.54

Net cost of the Works, December 1, 1867,		\$ 532,273.64
--	--	---------------

Receipts from water-rates for the year ending December 1, 1867, ...		\$ 52,733.62
Receipts from water-rates for the year ending December 1, 1866, ...		40,073.27

Increase of water-rates, ...		\$ 12,660.35
------------------------------------	--	--------------

Receipts from all sources for the year ending December 1, 1867, ...	\$66,040.66
Receipts from all sources for the year ending December 1, 1866, ...	51,398.59
Increase of receipts in 1867, ...	\$14,642.07

For a more specific statement of the financial account of the Water Works, reference may be had to the accompanying report of the Water Registrar, marked A.

The sinking fund authorized by the Legislature for the final redemption of the Water debt amounted on the first day of July, 1867, to \$18,935.89, and is in charge of the Commissioners appointed for that purpose.

In the prosecution of the work the present year a 24-inch pumping main has been laid from the engine-house to the reservoir, a distance of 2,465 feet.

A 20-inch street main has been laid from the termination of the pipe laid last year, near the junction of Broadway and Cambridge Street, down Broadway to Court Street, a distance of 10,072 feet.

A 12-inch street main has been laid from the Broadway pipe, through Court and Third Streets, to Bridge Street, a distance of 3,915 feet; and also on Inman Street from Broadway to Harvard Street, 492 feet. Total of 12-inch pipe, 4,407 feet.

We have also laid 129 feet of 6-inch pipe in Dock Street, and in various localities 15,590 feet of 4-inch and 2,550 feet of 3-inch pipe; making a total of all sizes of pipe laid the present year of 35,214 feet. Whole amount of pipe of all sizes connected with the Works, 194,958 feet, or nearly 37 miles. For a detailed account of the location of the pipe, and for a full and definite statement of all branches of the work performed, we would refer you to the accompanying report of the Superintendent, which is hereunto annexed, marked B.

All this work has been done to carry forward the plan recommended by Mr. George H. Bailey, the Engineer employed in the early part of the year 1866, which recommendation was in accordance with the views entertained by this Board, and which they have substantially adhered to thus far.

Several months ago the Board decided to place meters upon all large supplies, and the result thus far has been highly satisfactory, showing a large increase in the water-rates. Eight new meters have been set this year, making fourteen now in use. Thirty-one hydrants have been set, most of which are connected with the large mains laid this year, which will be of great service in case of fire. During the present year, we have lowered a portion of the pipes in Spring Street and Western Avenue, and have relaid a portion of the pipe in Otis Street.

We have built a house upon the land purchased of Mr. Josiah Coolidge for the Engineer at the Engine-House, at a cost, including fences, of about \$3,200.

No progress has been made in the contemplated work at the reservoir, except to procure the second tier of coping-stones for the new reservoir (which had already been contracted for), the appropriation made at the early part of the year not being sufficient to warrant the Board in prosecuting that work, unless they abandoned laying some portion of the large mains which have been laid, and which they believed to be of the first and most vital importance to the great body of water-takers. The result of laying these large pipes has clearly demonstrated the correctness of our views in this respect, for we find that the water now flows into the second story of every house but two connected with the Works. We hope, when the reservoirs are completed, giving an increased head of some five feet, every house will receive an abundant supply. Should this not prove to be so, the stand pipe, which may be completed at small expense, will remove all difficulty, and enable us to supply abundantly buildings that may be erected on the highest land in the City.

The increased number of water-takers early admonished the Board that the time had arrived when it became their imperative duty to take measures to increase the pumping power before the present pumps had become entirely overburdened, and the interests of the citizens endangered by their failure, in consequence of their being forced beyond their legitimate capacity. Consequently, in the early part of the year, a committee was appointed, with instructions to make a thorough examination of the different pumps in use by the various water works in this

part of the country ; having regard not only to the cost of the pumps, but particularly to the economy with which the required work could be performed by the different pumps examined. After a full and careful examination, covering a period of several months, that committee reported in favor of Worthington's Duplex Pump, being the same as those now in use, but embracing important improvements. The report of that committee, giving in detail the reason upon which their decision was based, is hereto annexed, marked C, to which your attention is respectfully invited.

The recommendation of that committee, sustained as it was by our own experience with the pumps now in use for some twelve years, was adopted by the Board, and a contract has been entered into with Henry R. Worthington, Esq., for a pump capable of raising into our reservoir five million gallons in twenty-four hours, at a cost of \$40,000, including pump-boilers, foundations, connecting-pipes, &c., together with all plans and drawings necessary for the completion of the work covered by the contract. The whole work is to be completed by the first day of June, 1868, should the City of Cambridge complete the necessary enlargement of the building required for that purpose before that time.

In addition to this work, it will be necessary to excavate a channel from the well-room into the pond, a distance of some 275 feet, to enable us to draft our supply directly from deep water. The best method of performing this work has not yet been fully determined upon.

The Board intend also to make arrangements to complete the Reservoirs early in the spring, and hope to be able to complete both Reservoirs during the summer. When these two objects shall have been accomplished, and the twelve-inch pipe extended from Harvard Street to the southerly part of Ward Four, the great outlay required for the proper extension of the Works will have been made, and the future expenses will be confined mainly to the lateral extension of the smaller pipes as the wants of the inhabitants shall from time to time require.

In extending the present Engine-House to the north for the reception of the new pump, we shall be compelled to occupy a

portion of the ground now occupied by the coal-shed, which will necessitate the building of a new coal-shed. This coal-shed should be built at the other end of the Engine-House to enable us to reach it by the railroad track if we so desired, which will be the case whenever we shall land our coal at Charlestown, which we may often wish to do. The City of Cambridge does not own sufficient land, and we would recommend the purchase of a strip upon the edge of the pond of Jacob Hittinger, Esq., sufficient for that purpose. We would also recommend the purchase of a small strip of land north of the Engine-House, and lying between our present line and the northerly line of the land which we purchased of Josiah Coolidge, extended across the railroad to the point of intersection with our northerly line in the pond, for the purpose of storage and for the future security of our buildings. Mr. Hittinger expresses a willingness to accommodate the City upon reasonable terms.

We would also call the attention of the City Council to the imperative necessity of procuring some place for storage of the materials belonging to the Water Works. A large amount of material, and some of it of a costly nature, must of necessity be kept on hand to meet any contingency which may arise, a portion of which should at all times be kept under cover. We think sufficient land should be procured for the storage of all our material, and a proper shed built for the security of such materials as require shelter. We trust this subject will claim your early attention.

All of which is respectfully submitted,

JOHN SARGENT,	} <i>Cambridge Water Board.</i>
EZRA PARMENTER,	
SAML. SLOCOMB,	
ROBT. DOUGLASS,	
A. K. P. WELCH,	
C. W. KINGSLEY,	
M. T. BIGELOW,	

In Board of Aldermen, December 18, 1867.

Accepted, and, together with the accompanying documents,
ordered to be printed with the next City documents.

Sent down for concurrence.

Attest : JUSTIN A. JACOBS, *City Clerk.*

In Common Council, December 28, 1867.

Concurred.

Attest : JOS. G. HOLT, *Clerk.*

A.

*

R E P O R T

OF

T H E W A T E R R E G I S T R A R .

OFFICE OF THE WATER WORKS,

Cambridge, December 1, 1867.

To the Cambridge Water Board : —

GENTLEMEN, — I herewith submit the following Report, as required by the Ordinance providing for the care and management of the Cambridge Water Works : —

RECEIPTS.

The total amount of water-rates received for the	
year ending November 30, 1867, was . . .	\$ 52,733.62
Cash received on supply account, . . .	11,647.55
“ “ from sales of sheet iron, . . .	1,659.49
Total cash receipts from all sources, . . .	\$66,040.66
All of which has been paid into the City Treasury.	

EXPENDITURES.

The expenditures for the care and management of the Works for the year ending November 30, 1867, have been as follows : —

For care and repairs, ...	\$ 9,494.71
“ pumping service, ...	6,129.61
“ office expense, ...	2,189.00
Total amount, ...	\$17,813.32

The expenditure on the extension of the Works for
the year ending November 30, 1867, was . . . \$188,625.06
The expenditure on supply account for the year
ending November 30, 1867, was . . . 9,765.14

Received for water-rates for the year ending Novem-
ber 30, 1867, ... \$ 52,733.62
Expended for the care and management of the
Works, ... 17,813.32

Balance in favor of the Works, ... \$34,920.30

SUPPLY ACCOUNT.

Cash received on above account, . . \$11,647.55
Now due, ... 2,458.58

\$14,106.13
There was reported as due December
1, 1866, ... \$2,686.90
Since expended, ... 9,765.14

12,452.04

Balance in favor of account, ... \$1,654.09

During the year there have been 58 cases where abatements
have been made on water bills.

For short supply of water, 36 ; amounting to . . . \$211.75
“ vacancy, 22 ; amounting to 103.62

Total amount of abatements, ... \$315.37

During the year the water has been turned off, for non-pay-
ment of rates, 31 times. Of this number 25 have been let on,
leaving a balance of 6 still remaining off.

248 supply pipes have been laid since December 1, 1866, sup-
plying,

265 Families.

19 Stables.

9 Manufactories.

4 Garden Hydrants.

4 Stationary Engines.

2 Stores.

2 Greenhouses.

2 Slaughter-Houses.
 1 Observatory.
 1 State Arsenal.
 1 Public House.
 1 Boarding-House.
 1 Laboratory.
 1 Church.
 1 Marble Works.
 1 Cattle Yard.
 1 Cow Pasture.
 1 Foundry.

STATEMENT

SHOWING THE NUMBER OF FAMILIES, STORES, MANUFACTORIES, &c., SUPPLIED WITH FRESH POND WATER TO
 DECEMBER 1, 1867.

3,299 Families.
 143 Stores and Offices.
 237 Stables.
 59 Manufactories and Shops.
 43 Garden Hydrants.
 142 Hand Hose.
 51 Stationary Engines.
 118 Fire Hydrants.
 25 Boarding-Houses.
 14 Bakeries.
 14 Soap Factories.
 10 Saloons.
 7 Greenhouses.
 7 Fountains.
 6 Furniture Manufactories.
 5 Churches.
 5 Photograph Rooms.
 5 Banks.
 5 Book Binderies.
 5 Printing Offices.

- 4 Fire-Engine Houses.
- 4 Billiard Halls.
- 4 Iron Foundries.
- 4 Horse-Railroad Stables.
- 4 Cow Pastures.
- 4 Glass Manufactories.
- 3 Police Stations.
- 3 Public Houses.
- 3 Slaughter-Houses.
- 2 Club Stables.
- 2 Laboratories.
- 2 Oil Works.
- 2 Chemical Works.
- 2 Bacon Works.
- 2 Cattle Yards.
- 2 Confectioners.
- 1 Steam Tug.
- 1 Gas Works.
- 1 Distillery.
- 1 House of Correction.
- 1 Cigar Manufactory.
- 1 Marble Works.
- 1 Reversible Collar Co.
- 1 Fruit-Preserving House.
- 1 City Hall.
- 1 University.
- 1 Gymnasium.
- 1 Laundry.
- 1 Nursery.
- 1 Observatory.
- 1 State Arsenal.
- 1 Bleachery.
- 1 Tube Works.
- 1 City Stable.
- 1 Public Library.
- 1 Stereotype Foundry.

During the year 8 meters have been applied to the premises of water-takers.

STATEMENT SHOWING THE NUMBER AND SIZES OF METERS
IN USE, DECEMBER 1, 1867.

	SIZE OF METERS.				
	$\frac{3}{8}$ inch.	$\frac{3}{4}$ inch.	1 inch.	2 inch.	4 inch.
Middlesex Bleachery, ...					1
North, Meriam, & Co., ...				1	
Boston and Lowell R. R. Co., ...				2	
Sortwell & Co., ...				1	
J. P. Squire & Co., ...				1	
Charles E. Meyer & Co., ...				1	
Cambridge Horse Nail Co., ...				1	
New England Glass Co., ...				1	
American Tube Works, ...				1	
William Lincoln & Co., ...			1		
Billings & Bulloch, ...			1		
Welch, Bigelow, & Co., ...		1			
Commons Hall, ...	1				
Shawmut Iron Works, ...	1				

During the year the premises of each water-taker have been visited, and the examinations made have resulted in the correction of the rates to the advantage of the City.

Respectfully submitted,

A. F. FIFIELD,
Registrar.

B.

REPORT

OF THE

SUPERINTENDENT OF THE WATER WORKS.

OFFICE OF THE WATER WORKS,
City Hall, December 1, 1867.

To the Cambridge Water Board:—

GENTLEMEN,—In compliance with the ordinance providing for the care and management of the Cambridge Water Works, I herewith submit my

ANNUAL REPORT.

The following is a statement of main and branch pipes laid, the streets through which laid, their size, length, &c., with all gates, stopcocks, waste-gates, and blow-off pipes, set since last report.

LOCATION OF THE MAIN AND BRANCH PIPES.

STREETS.	SIZE.	LENGTH.
	Inches.	Feet.
Pumping main from Engine-House to Reservoir, ...	24	2,340
Discharge pipe from stand pipe to 24-inch gate in Reservoir Street, ...	24	125
Cambridge Street and Broadway, from Kirkland Street to Court Street, ...	20	10,072½
Court Street and Third Street, from Broadway to Bridge Street, ...	12	3,915
Inman Street, Broadway to Harvard Street, ...	12	492
Dock Street, from Broadway, ...	6	129
Hancock Street, from Harvard to Centre Street, ...	4	362
Centre Street, from Hancock to Dana Street, ...	4	690
Dana Street, south from Centre Street, ...	4	93

STREETS.	SIZE.	LENGTH.
	Inches.	Feet.
Hampshire Street, extended west of Amory Street, ...	4	257
Forest Street, extended east, ...	4	379
Oxford Street, from Forest to Harris Street, ...	4	312
Harris Street, from Oxford, ...	4	172
Lowell Street, from Brattle Street, ...	4	668
Rice Street, from North Avenue, ...	4	36
Allen Street, from North Avenue, ...	4	45
Ellery Street, from Cambridge Street, ...	4	215
Blackstone Street, to Riverside Press, ...	4	129
Webster Street, extended west, ...	4	170
Cogswell Avenue, from North Avenue, ...	4	53
North Avenue, opposite Milk, Hydrant Branch, ...	4	14
Arlington Street, Hydrant Branch, ...	4	18
Bowdoin Street, from Linnæan Street, ...	4	410
Concord Avenue, opposite Craigie Street, Hydrant Branch, ...	4	24
Pearl Street, extended to Green Street, ...	4	85
Green Street, from Pearl, ...	4	244
Warland Street, from Magazine Street, ...	4	402
Avon Street, to Shepard Street, ...	4	884
Shepard Street, from North Avenue, ...	4	780
Mellen " extended to Oxford Street, ...	4	437
Oxford " to Hammond Street, ...	4	85
Hammond Street, east from Oxford Street, ...	4	180
Antrim " from Cambridge Street, ...	4	148
Clinton " " Harvard "	4	400
Short " " Magazine "	4	330
Russell " " North Avenue, ...	4	755
Otis and First Street, in place of old pipe taken out, ...	4	440
Green Street, extended east, ...	4	292
Trowbridge Street, from Harvard Street, ...	4	236
Sparks " north from Brattle Street, ...	4	641
Amory " from Hampshire Street, ...	4	234
Chauncy " " North Avenue, ...	4	535
Park " " Magazine Street, ...	4	253
Prospect " " Cambridge to Hampshire Street, ...	4	500
Gore " " Lambert Street, ...	4	1,152
Trowbridge " " Broadway, ...	4	465
De Wolf " " Mount Auburn Street, ...	4	405
Elm " north from Broadway, ...	4	675
Broadway and Hampshire Street, ...	4	37
" opposite Tucker's, Hydrant Branch, ...	4	34
Brattle and Lowell Street, " "	4	13
Willow Street, from North Avenue, ...	4	91
Garden " opposite Bond, Hydrant Branch, ...	4	11
Quincy " from Broadway, ...	4	120
Prescott Street, from Broadway, ...	4	74
Ware " " "	4	63
Cambridge Street and "	4	55
Ellery " from "	4	47
Dana " " "	4	75
Ellsworth Avenue " "	4	41
Hancock Street " "	4	57
Fayette " " "	4	39
Antrim " " "	4	54

STREETS.	SIZE.	LENGTH.
	Inches.	Feet.
Amory Street, from Broadway, ...	4	41
Tremont " " "	4	44
Norfolk " " "	4	38
Boardman " " "	4	61
Pine "	3	63
Spring " west from Seventh Street, ...	3	139
Norfolk " extended to Harvard Street, ...	3	57
Washington Street, extended to Norfolk Street, ...	3	340
Stevens Court, ...	3	213
Eighth Street, from Spring Street, ...	3	93
Austin " extended to Norfolk Street, ...	3	145
Gerry " from Mount Auburn "	3	353
River " " Blackstone Street, ...	3	375
Fourth " south from Winter Street, ...	3	125
Fifth " extended to Thorndike Street, ...	3	158
Thorndike Street, west from Seventh "	3	132
Beech Avenue, from Webster Avenue, ...	3	200
Hancock Street, ...	3	45
Fayette "	3	60
Norfolk "	3	52

The following gates and stopcocks have been established in connection with the pipes laid the present year:—

STREETS.	NUMBER.	SIZE.
		Inches.
Broadway, near Inman Street, ...	1	20
" " Davis "	1	20
Davis Street and Broadway, ...	1	12
Pumping main at Engine-House, ...	2	12
Court Street at Canal, ...	2	12
Third " near Cambridge Street, ...	1	12
Broadway and Inman Street, ...	1	12
Gore and Third Street, ...	2	6
Cambridge and Third Street, ...	1	6
Broadway and Moore "	1	6
" " Dock "	1	6
" " Court "	1	6
" on reducer, at end of 20-inch pipe, ...	1	6
Lowell and Brattle Street, ...	1	4
Cambridge, near Bridge Street, ...	1	4
North Avenue and Allen Street, ...	1	4
" " Willow Street, ...	1	4
" " Cogswell Avenue, ...	1	4
" Hydrant Branch near Bridge, ...	1	4
" and Arlington Street, ...	1	4
Linnæan and Bowdoin Street, ...	1	4
Garden, opposite Bond Street, Hydrant Branch, ...	1	4
Magazine and Warland Street, ...	1	4
Western Avenue and Auburn Street, ...	1	4
River and Fremont Street, ...	1	4
North Avenue and Shepard Street, ...	1	4

STREETS.	NUMBER.	SIZE.
		Inches.
Harvard and Clinton Street, ...	1	4
Magazine and Short "	1	4
North Avenue and Russell Street, ...	1	4
Harvard and Trowbridge "	1	4
Hampshire and Prospect "	1	4
North Avenue and Chauncy Street, ...	1	4
Magazine and Park Street, ...	1	4
Court, between Canal and Charles Street, ...	6	4
Cambridge and Hampshire Street, ...	1	4
Third and Charles Street, ...	2	4
" " Vine Street, ...	2	4
" " Spring Street, ...	2	4
" " Thorndike Street, ...	2	4
" " Winter Street, ...	1	4
" " Otis Street, ...	2	4
" " Bridge Street, ...	1	4
Gore and Fifth Street, ...	1	4
Harvard and Inman Street, ...	3	4
" " Remington Street, ...	1	4
Mount Auburn and De Wolf Street, ...	1	4
Broadway and Cambridge Street, ...	1	4
" " Quiney Street, ...	1	4
" " Prescott Street, ...	1	4
" " Ware Street, ...	2	4
" " Trowbridge Street, ...	2	4
" " Ellery Street, ...	2	4
" " Dana Street, ...	2	4
" " Ellsworth Avenue, ...	1	4
" " New Street, ...	1	4
" " Hancock Street, ...	1	4
" " Lee Street, ...	1	4
" " Fayette Street, ...	1	4
" " Antrim Street, ...	1	4
" " Inman Street, ...	1	4
" " Amory Street, ...	1	4
" " Prospect Street, ...	2	4
" " Tremont Street, ...	1	4
" " Norfolk Street, ...	2	4
" " Elm Street, ...	2	4
" " Columbia Street, ...	2	4
" " Boardman Street, ...	1	4
" " Windsor Street, ...	2	4
" " Clark Street, ...	2	4
" " Davis Street, ...	1	4
" " Hampshire Street, ...	1	4
" " Brewery Street, ...	1	4
" opposite Tucker's, Hydrant Branch, ...	1	4
" and Street east of Reservoir, ...	1	4
" " " " Hannum's Lot, ...	1	4
" " Pioneer Street, ...	1	4
Norfolk and Main Street, ...	1	3
" " Harvard Street, ...	1	3
Fifth and Thorndike Street, ...	1	3
Cambridge and Ellery Street, ...	1	2

STREETS.		NUMBER	SIZE.
			Inches.
Cambridge and Antrim Street, ...		1	2
Webster and Beech Avenue, ...		1	2
Broadway and Quincy Street, ...		1	2
“ “ Prescott Street, ...		1	2
“ “ Maple Avenue, ...		1	2
BLOW-OFF PIPES.			
Broadway and Cambridge Street, ...		1	4
“ “ Antrim Street, ...		1	4
Ellery Street, ...		1	1½
Green Street, ...		1	1½
Warland Street, ...		1	1½
Shepard Street, ...		1	1½
Antrim Street, ...		1	1½
Short Street, ...		1	1½
Gerry Street, ...		1	1½
Fourth Street, ...		1	1½
Trowbridge Street, ...		1	1½
Sparks Street, ...		1	1½
Amory Street, ...		1	1½
Chauncy Street, ...		1	1½
Park Street, ...		1	1½
Thorndike Street, ...		1	1½
Russell Street, ...		1	1½
Dock Street, ...		1	1½

LOCATION OF ALL MAIN AND BRANCH PIPES, GATES, STOP-
COCKS, &c., LAID TO DECEMBER 1, 1867.

STREETS.		SIZE.	LENGTH.
		Inches.	Feet.
From Engine-House to the Reservoir, ...		24	2,340
Discharge pipe from stand pipe to 24-inch gate in Reservoir Street, ...		24	125
From Reservoir through Highland, Appleton, Brattle, and Craigie, ...		24	3,645
From Engine-House into the Pond, ...		20	288
Duplicate, ...		20	18
From Craigie through Concord Avenue to Cambridge, ...		20	2,769
“ Cambridge through Broadway to Court, ...		20	10,072.6
“ Engine-House to the Reservoir, ...		12	2,300
“ the Reservoir through Brattle to Mason, ...		12	3,650
“ Broadway through Court to Bridge, ...		12	3,915
“ “ “ Inman to Harvard, ...		12	492
“ Mason through Brattle to Harvard Square, ...		10	11,780
“ Harvard Square through Harvard to Main, ...		10	
“ “ through Main to Putnam, ...		10	
“ Brattle “ Mason to Garden, ...		10	
“ Mason “ Garden to Cambridge, ...		10	
“ Garden “ Cambridge to Columbia, ...		10	

STREETS.	SIZE.	LENGTH.
	Inches	Feet.
From Cambridge, through Prospect, to Somerville line, . . .	10	400
“ Somerville line, through Prospect, to Glass Works (cement), ...	10	1,000
From Concord Avenue, through Garden, Bond, and Linnæan (cement), ...	10	4,916.6
North Avenue, at Fitchburg Railroad Crossing, ...	10	110.6
From Fitchburg Railroad Crossing, through North Avenue, to Beech (cement), ...	8	736.8
From Putnam, through Main, to Magazine, ...	8	3,000
“ Columbia, through Cambridge, to Fifth, ...	8	3,000
North Avenue, from Beech to Rice (cement), ...	6	2,661.6
Main, from Magazine to Foundry, ...	6	2,600
“ “ Foundry to junction of Broadway (cement), ...	6	3,113.9
Walnut, from Pleasant, east, ...	6	491
North Avenue, near Arlington, to connect with cement pipe, ...	6	48.6
Harvard, from Main to Hancock, ...	6	2,500
Cambridge, from Fifth to Bridge, ...	6	2,000
From Mason, through Garden and Waterhouse, ...	6	800
North Avenue, from Waterhouse to Arlington, ...	6	3,265
From North Avenue, through Sacramento, Union, and Milk, to Middlesex Bleachery, ...	6	3,790
Dock, from Broadway, ...	6	129
Magazine, from Erie, north, ...	6	846.6
Ash, “ Brattle to Gas Works, ...	4	1,250
Auburn, “ River, east, ...	4	567
Arlington, “ North Avenue, ...	4	448
Allen, “ “ “	4	45
Avon, “ Linnæan to Shepard, ...	4	884
Arlington, Hydrant Branch, ...	4	18
Antrim, from Cambridge, ...	4	148
“ “ Broadway, Hydrant Branch, ...	4	54
Amory, “ Hampshire, ...	4	234
Berkeley and Phillips Place, from Mason to Craigie, ...	4	1,745
Brighton, from Brattle to Planing Mill, ...	4	969
Broadway, “ Moore to Hampshire, ...	4	800
Brookline, “ Main, south, ...	4	1,828
Bridge, “ Craigie's Bridge to Somerville, ...	4	3,369
Bowdoin, “ Linnæan, ...	4	410
Broadway, junction of Hampshire, Hydrant Branch, ...	4	37
“ opposite Tucker's Factory, “ “	4	34
Brattle, corner of Lowell, Hydrant Branch, ...	4	13
Boardman, from Broadway, “ “	4	61
Blackstone, “ River to Riverside Press, ...	4	129
Cambridge, junction of Broadway, Hydrant Branch, ...	4	55
Clinton, from Harvard, ...	4	400
Concord Avenue, opposite Craigie, Hydrant Branch, ...	4	24
Cogswell Avenue, from North Avenue, ...	4	53
Centre, from Hancock to Dana, ...	4	690
Chauncy, from North Avenue, ...	4	535
Chester, “ “ “	4	522.8
Craigie, “ Brattle to Buckingham (cement), ...	4	352
Clark, “ Washington to Chaney's Factory, ...	4	500
Cherry, “ Main to Harvard, ...	4	1,150

STREETS.		SIZE.	LENGTH.
		Inches.	Feet.
Columbia, from Main to Washington,		4	775
“ “ Harvard to Worcester,		4	252
Dunster, “ Harvard Square (cement),		4	300
Dana, “ Harvard, south,		4	196
“ “ Cambridge,		4	580
“ “ Centre, south,		4	93
“ “ Broadway,		4	75
Davis, “ Harvard to Broadway,		4	400
De Wolf, “ Mount Auburn,		4	405
Ellery, “ Broadway, Hydrant Branch,		4	47
“ “ Cambridge,		4	215
Ellsworth Avenue, from Broadway,		4	41
Erie, from Pearl to Magazine,		4	500
East, “ North to Hall's Wharf,		4	250
Elm, “ Broadway, north,		4	675
Forest, from North Avenue (cement),		4	742.4
“ extended east (iron),		4	379
Front, from Main,		4	400
Franklin, from Brookline to Pearl,		4	457
Fourth, “ Cambridge to Spring,		4	898
“ “ Bridge, south,		4	149
Fifth, “ Thorndike, south (cement),		4	105
“ “ Cambridge to Winter,		4	450
Foundry, “ Main to Osborn's Mill,		4	492
Fayette, “ Broadway,		4	39
Green, “ Pearl,		4	244
“ “ Putnam,		4	412
Gore, “ Fourth, west,		4	2,612
Garden, opposite Bond, Hydrant Branch,		4	11
Hancock, from Broadway,		4	57
“ “ Harvard to Centre,		4	362
Hammond, “ Oxford,		4	265
Harris, from Oxford,		4	172
Hastings, from Moore,		4	800
Holyoke, from South to Harvard,		4	709
Harvard, from Hancock to Columbia,		4	2,643.9
“ “ Cherry to Pioneer,		4	3,187.6
Hampshire, from Columbia to Amory,		4	1,510
Irving, from Cambridge, (cement),		4	321
Kirkland, from Cambridge to Sumner,		4	1,436
Lincoln, from Windsor,		4	290
Lee, from Main,		4	397
“ “ Harvard, north,		4	256
Leighton Court, from East,		4	1,460
Lowell, from Brattle,		4	468
Mt. Auburn, from Ash, east,		4	769
“ “ “ Holyoke, east,		4	1,239
Market, from Union to Bristol,		4	550
Magazine, from Erie, south,		4	187
Moore, from Harvard to Hastings,		4	225
Main, from junction of Broadway, east,		4	1,300
Mellen, from Oxford, east,		4	437
Milk Row, from Bleachery to Tube Works,		4	1,899
North Avenue, opposite Milk, Hydrant Branch,		4	14

STREETS.		SIZE.	LENGTH.
		Inches.	Feet.
North Avenue, from Holmes's Chapel to Fitchburg R. R.			
Bridge (cement), ...		4	540
North Avenue to Railroad Stable, ...		4	200
Norfolk, from Hampshire, south, ...		4	783
" " Broadway, north, ...		4	38
North, from Water to East, ...		4	775
Oxford, from Forrest to Harris, ...		4	312
" " Kirkland, north, ...		4	600
Otis, from Fifth, east, ...		4	300
" " First to Second, ...		4	493
" " Third to Fourth, ...		4	434
" " Fifth to Seventh, ...		4	675
Palmer, from Brattle to Church, ...		4	378
Park, from Magazine, ...		4	253
Prescott, from Broadway for Hydrant Branch, ...		4	74
Putnam, from Main to Franklin (cement), ...		4	597
" " Franklin to Kinnard, ...		4	388
Pearl, from " south, ...		4	2,174
" " " to Green, ...		4	239
Pleasant, from Main, ...		4	188
" " Walnut, south, ...		4	333
Prospect, " Main to Cambridge, ...		4	3,290
Quincy, " Broadway, south, ...		4	120
Russell, " North Avenue, ...		4	755
Rice, " " "		4	36
River, " Main to Fremont, ...		4	2,530
" " Fremont to Blackstone (cement), ...		4	606
Sparks, " Brattle, ...		4	641
Short, " Magazine, ...		4	330
Shepard, " North Avenue, ...		4	780
Sumner, " Kirkland, south, ...		4	420
School, " near Pine to Windsor, ...		4	400
" " Windsor nearly to Main, ...		4	919
Second, " Cambridge to House of Correction, ...		4	506
Seventh, " " " Thorndike (cement), ...		4	528
Sixth, " Thorndike, south, ...		4	245
Spring, " Fourth, west, ...		4	437
" " Sixth, east, ...		4	218.9
South, " Brighton to Holyoke, ...		4	553
Tremont, " Broadway, ...		4	44
Thorndike, from Seventh, east (cement), ...		4	912
Third, from Otis, south, ...		4	1,200
" " Cambridge to Bridge, ...		4	500
Trowbridge, from Harvard to Broadway, ...		4	701
Warland, from Magazine, ...		4	402
Water, from Bridge to North, ...		4	225
Western Avenue, from Pleasant, south, ...		4	927
Windsor, from Main to School, ...		4	250
" " Cambridge, south, ...		4	1,909
" " Harvard to Market, ...		4	597
Washington, from Columbia, east, ...		4	2,200
Webster, from Magazine, west, ...		4	465
Wendell, from North Avenue, ...		4	461
Willow, from North Avenue, ...		4	91

STREETS.		SIZE.	LENGTH.
		Inches.	Feet.
Ware, from Broadway, Hydrant Branch, ...		4	63
Webster Avenue, from Prospect, south, ...		4	339
Austin, from Columbia to Norfolk, ...		3	653
“ “ Inman, ...		3	236
Appleton, from Brattle, ...		3	878
Auburn, “ Pearl, east, ...		3	80
“ “ Auburn Court, east, ...		3	222
Allston, “ Pearl, east, ...		3	178
Buckingham, from Craigie, ...		3	640
Broadway, “ Columbia, east, ...		3	312
“ “ Pioneer to Skinner's Wharf, ...		3	901
“ “ Dana, east, ...		3	491
“ “ E. Raymond's, east, ...		3	90
Bristol, “ Market, north, ...		3	250
Beech Avenue, from Webster Avenue, ...		3	200
Bolton, “ Oak, ...		3	288
Clark, “ Hampshire, north, ...		3	234
Columbia, “ Washington to Worcester, ...		3	397
“ “ Harvard, north, ...		3	600
“ “ Cambridge, “		3	598
Clinton, “ Main, “ †		3	578
Charles, “ Third, west, ...		3	230
Dana, “ Harvard to Broadway, ...		3	616
Distil-house, “ Cambridge, north, ...		3	706
Eighth, “ Spring, ...		3	93
Erie, “ Pearl, east, ...		3	256
Essex, “ Harvard, south, ...		3	1,036
Elm, “ Hampshire, north, ...		3	225
Ellsworth Avenue, from Broadway, ...		3	920
Ellery, from Main, ...		3	215
Fayette, “ Broadway to Cambridge, ...		3	1,333
Fifth, “ Otis to Thorndike, ...		3	233
“ “ “ north, ...		3	100
Fourth, “ Winter, south, ...		3	125
Franklin, “ Brookline, east, ...		3	108
Gerry, “ Mount Auburn, ...		3	353
Hancock, “ Harvard to Broadway, ...		3	493
Harvard, “ Cherry to Boardman, ...		3	100
Harvard Square to Church, ...		3	332
Holyoke Place, from Holyoke, ...		3	220
Hampshire, “ Clark, east, ...		3	143
Howard, “ Mount Auburn, ...		3	272
Irving, “ Kirkland, south, ...		3	515
Inman, “ Main, ...		3	557
“ “ Cambridge, ...		3	697
Jay, “ Western Avenue, ...		3	323
Kirkland, “ Irving, west, ...		3	570
Kinnard, “ River, “		3	153
Linden, “ Harvard, ...		3	172
Market, “ Union, west, ...		3	84
Maple Avenue, “ Cambridge, ...		3	1,111
Magazine, from near Hamilton to Magazine Court, ...		3	412
“ Court, from Magazine, ...		3	480
Mellen, from North Avenue, ...		3	489

STREETS.		SIZE.	LENGTH.
		Inches.	Feet.
Norfolk, from Main to Harvard,		3	1,307
“ “ Cambridge, north,		3	639
“ “ Broadway, “		3	172
Oak, “ Prospect, .		3	510
Pine, “ School, .		3	243
Pioneer, “ Main to Broadway, .		3	280
Passage-way from Bristol and Clark Streets,		3	224
Quincy, from Harvard, north,		3	982
River, “ Blackstone, south, .		3	375
Remington, from Main, .		3	234
Spring, “ Third, west, .		3	383
Second, “ Cambridge, north, .		3	200
Seventh, “ Thorndike, south, .		3	135
Short, “ North, .		3	180
School Court, “ Brattle, .		3	200
Soden, “ Western Avenue, .		3	253
Story, “ Brattle, .		3	311
Sixth, “ Otis, north, .		3	181
Spring, “ Seventh, west, .		3	139
Stevens Court, from Fourth, .		3	213
Temple, “ Main, .		3	190
Tremont, “ Hampshire to Broadway, .		3	1,050
“ “ Cambridge, north, .		3	171
Third, “ “ south, .		3	158
Trowbridge, “ Harvard, north, .		3	308
Thorndike, “ Third, west, .		3	383
“ “ Fourth, east, .		3	93
“ “ Seventh, west, .		3	132
Union, “ Lincoln, south, .		3	717
Vine, “ Third, west, .		3	383
Valentine, “ Brookline, .		3	240
Village, “ Front, .		3	353
Winter, “ Fifth to Bridge, .		3	900
Webster Avenue, from Somerville line, south,		3	1,030
Worcester, from Columbia to Norfolk, .		3	444
William, “ River, east, .		3	647
Watson, “ Pearl to Brookline, .		3	522
Windsor, “ Cambridge, north, .		3	362
Washington, “ Columbia to Norfolk, .		3	495
Ware, “ Harvard, north, .		3	300
Winthrop, west from Winthrop Square, .		3	78
Walnut Court, from Magazine Court to Walnut, .		3	52

GATES AND STOPCOCKS.

STREET.	No.	Size. Inches.
Near the Reservoir, ...	3	24
Junction of Craigie and Concord Avenue, ...	1	20
“ “ Cambridge and Kirkland, ...	1	20
Broadway, at Inman, ...	1	20
“ “ Davis, ...	1	20
At the Reservoir, ...	1	16
Broadway, at Davis, ...	1	12
At Engine-house, on pumping main, ...	4	12
Court, at Broad Canal, ...	2	12
Third, near Cambridge, ...	1	12
Broadway, at Inman, ...	1	12
Highland, ...	2	12
At the Reservoir, ...	1	12
Concord Avenue, near Craigie, ...	1	10
North Avenue, at Fitchburg Railroad Bridge, ...	1	10
Cambridge, near Kirkland, ...	1	10
Brattle and Mason, ...	1	10
“ near the “ University Press,”	1	10
Cambridge, at Prospect, ...	1	10
“ near Columbia, ...	1	8
Main, at Dana, ...	1	8
North Avenue, at Beech, ...	1	8
Gore, at Third, ...	2	6
Cambridge, at Third, ...	1	6
Broadway, at Moore, ...	1	6
“ “ Dock, ...	1	6
“ “ Court, ...	1	6
“ on reducer, at end of 20-inch pipe, ...	1	6
Cambridge, at Second, ...	1	6
Harvard, near Ware, ...	1	6
Main, at Columbia, ...	1	6
Milk Row, at Bleachery, ...	1	6
North Avenue, near Shepard, ...	1	6
“ “ “ Sacramento, ...	1	6
“ “ “ Rice, ...	1	6
“ “ “ Arlington, ...	1	6
“ “ “ Holmes Place, ...	1	6
Concord Avenue, near Follen, ...	1	6
Craigie, near the Culvert, ...	1	6
Brattle, “ Sparks, ...	1	6
Main, “ Foundry, ...	1	6
“ at junction of Harvard, ...	1	6
Waterhouse, at Concord Avenue, ...	2	6
At the Reservoir, ...	1	6
Brattle, at Ash, ...	1	4
“ “ Brighton, ...	1	4
“ “ Craigie, ...	1	4
“ “ Palmer, ...	1	4
“ “ Lowell, ...	1	4
Broadway, at Trowbridge, ...	2	4

STREET.	No.	SIZE. Inches.
Broadway, at Ellery, ...	2	4
“ “ Dana, ...	2	4
“ “ Ellsworth Avenue, ...	1	4
“ “ New Street, ...	1	4
“ “ Hancock, ...	1	4
“ “ Lee, ...	1	4
“ “ Fayette, ...	1	4
“ “ Antrim, ...	1	4
“ “ Inman, ...	1	4
“ “ Amory, ...	1	4
“ “ Prospect, ...	2	4
“ “ Tremont, ...	1	4
“ “ Norfolk, ...	2	4
“ “ Elm, ...	2	4
“ “ Columbia, ...	2	4
“ “ Boardman, ...	1	4
“ “ Windsor, ...	2	4
“ “ Clark, ...	2	4
“ “ Davis, ...	1	4
“ “ Hampshire, ...	1	4
“ “ Brewery, ...	1	4
“ “ Pioneer, ...	1	4
“ “ Cambridge, ...	1	4
“ “ Quincy, ...	1	4
“ “ Prescott, ...	1	4
“ “ Ware, ...	2	4
“ opposite Tucker's, Hydrant Branch, ...	1	4
“ at passage-way east of Brick Reservoir, ...	1	4
Broadway, at passage-way east of Hannum's Block, ...	1	4
Cambridge, at Dana, ...	1	4
“ “ Windsor, south, ...	1	4
“ “ Seventh, “	1	4
“ “ Fifth, ...	1	4
“ “ Fourth, ...	1	4
“ “ Third, ...	1	4
“ near junction of Bridge, ...	1	4
“ junction of Hampshire, ...	1	4
Concord Avenue, near Craigie, Hydrant Branch, ...	1	4
Craigie, near the Culvert, ...	1	4
Columbia, at Washington, ...	1	4
Court, between Broad Canal, and Charles, ...	1	4
Garden, opposite Bond, Hydrant Branch, ...	1	4
Gore, at Fifth, ...	1	4
Harvard, at Lee, ...	1	4
“ “ Essex, ...	1	4
“ “ Main, ...	1	4
“ “ Clinton, ...	1	4
“ “ Trowbridge, ...	1	4
“ “ Inman, ...	3	4
“ “ Remington, ...	1	4
Harvard Square, at Dunster, ...	1	4
Hampshire, at Prospect, ...	1	4
Linnæan, near Avon, ...	1	4
“ at Bowdoin, ...	1	4

STREET.	No.	Size.
		Inches.
Main, at Ellery,	1	4
“ near Harvard, Ward Two,	1	4
“ “ West Boston Bridge,	1	4
“ at Brookline,	1	4
“ “ Cherry,	1	4
“ “ Prospect,	1	4
“ “ Putnam,	1	4
“ “ River,	1	4
Mason, at Phillips Place,	1	4
Magazine, near Erie,	1	4
“ at Warland,	1	4
“ “ Short,	1	4
“ “ Park,	1	4
Mt. Auburn, at Holyoke,	1	4
“ “ “ De Wolf,	1	4
Milk Row, near Tube Works,	1	4
North Avenue, at Arlington,	2	4
“ “ “ Wendell,	1	4
“ “ “ Forest,	1	4
“ “ “ Chester,	1	4
“ “ “ Allen,	1	4
“ “ “ Willow,	1	4
“ “ “ Cogswell Avenue,	1	4
“ “ near Fitchburg R. R. Bridge,	1	4
“ “ at Shepard,	1	4
“ “ “ Russell,	1	4
“ “ “ Chauncy,	1	4
River, at Fremont,	1	4
Third, “ Charles,	2	4
“ “ Vine,	2	4
“ “ Spring,	2	4
“ “ Otis,	2	4
“ “ Thorndike,	2	4
“ “ Winter,	1	4
“ “ Bridge,	1	4
Western Avenue, at Auburn,	1	4
Windsor, at Harvard,	1	4
At Craigie's Bridge,	1	3
Front, near Main,	1	3
Fifth, at Thorndike,	1	3
Norfolk, at Main,	1	3
“ “ Harvard,	1	3
Walnut, “ Walnut Court,	1	3
Broadway, at Quincy,	1	2
“ “ Prescott,	1	2
“ “ Maple Avenue,	1	2
Brattle, “ Story,	1	2
“ “ Appleton,	1	2
“ “ School Court,	1	2
Brighton, “ Winthrop Place,	1	2
Berkeley, “ Craigie,	1	2
Cambridge, at Ellery,	1	2
“ “ Antrim,	1	2
“ “ Sumner,	1	2

STREET.		No.	Size.
			Inches.
Cambridge, at Irving,	.	1	2
" " Maple Avenue,	.	1	2
" " Fayette,	.	1	2
" " Inman,	.	1	2
" " Tremont,	.	1	2
" " Norfolk,	.	1	2
" " Windsor,	.	1	2
" " Third,	.	1	2
" " North Second,	.	1	2
" " Distil-house,	.	1	2
Columbia, at Worcester,	.	1	2
Harvard, at Hancock,	.	1	2
" " Trowbridge,	.	1	2
" " Linden,	.	1	2
" " Quincy,	.	1	2
" " Ware,	.	1	2
" " Dana, north,	.	1	2
" " " south,	.	1	2
Holyoke, at Holyoke Place,	.	1	2
Mt. Auburn, at Howard,	.	1	2
Main, at Remington,	.	1	2
" " Lee,	.	1	2
" " Pleasant,	.	1	2
Main, at Clinton,	.	1	2
North Avenue, at Mellen,	.	1	2
North, at East,	.	1	2
Oak, " Prospect,	.	1	1½
Pearl, " Auburn,	.	1	2
" " Watson,	.	1	2
Webster Avenue, at Beech Avenue,	.	1	2

WASTE GATES.

Broadway, at Cambridge,	.	1	4
" " Antrim,	.	1	4
Bridge, near Craigie's Bridge,	.	1	3
Craigie, " the Culvert,	.	1	6
Front, at Village,	.	1	2
Gas-House Yard,	.	1	3
Main, near West Boston Bridge,	.	1	4
Osborn's Mill,	.	1	2

BLOW-OFF PIPES.

Arlington,	.	1	1½
Auburn, near Pearl,	.	1	1½
" " Brookline,	.	1	1½
Antrim,	.	1	1½
Amory,	.	1	1½
Allston,	.	1	1½
Broadway, near E. Raymond's,	.	1	1½
" " Boardman,	.	1	1½

STREET.	No.	Size.
		Inches.
Buckingham, ...	1	1½
Brookline, near Auburn, ...	1	1½
Bridge, " E. Train's store, ...	1	1½
" " Leland Estate, ...	1	1½
Bolton, ...	1	1½
Berkeley, ...	1	1½
Brookline, near Erie, ...	1	1½
Chauncy, ...	1	1½
Columbia, north from Broadway, ...	1	1½
Chestnut Place, ...	1	1½
Columbia, north from Cambridge, ...	1	1½
Clark, near Hampshire, ...	1	1½
Charles, " Fourth, ...	1	1½
Chester, ...	1	1½
Dock, ...	1	1½
Dana, ...	1	1½
Ellery, north from Main, ...	1	1½
Elm, ...	1	1½
Erie, ...	1	1½
Essex, near J. G. Ball's, ...	1	1½
Ellsworth Avenue, near Cambridge, ...	1	1½
Ellery, south from Cambridge, ...	1	1½
Fourth, near William Casey's, ...	1	1½
" " D. Lehan's, ...	1	1½
Green, east from Putnam, ...	1	1½
Gerry, ...	1	1½
Green, west from Pearl, ...	1	1½
Howard, ...	1	1½
Hampshire, near Amory, ...	1	1½
" " Hugh Finnegan's, ...	1	1½
Hastings, ...	1	1½
Holyoke, ...	1	1½
Imman, north from Austin, ...	1	1½
" south " Hampshire, ...	1	1½
Kirkland, west from Irving, ...	1	1½
" east " Preston, ...	1	1½
Lincoln, ...	1	1½
Linden, ...	1	1½
Lee, near Captain Ryder's, ...	1	1½
" " West, ...	1	1½
Main, " Skinner's Wharf, ...	1	1½
Magazine, near Franklin, ...	1	1½
Maple Avenue, ...	1	1½
Market, ...	1	1½
Mount Auburn, near J. P. Thayer's, ...	1	1½
" " " William L. Whitney's, ...	1	1½
Norfolk, near Webster Avenue, ...	1	1½
North Second, near Gore, ...	1	1½
North Avenue, at Rice, ...	1	1½
Park, ...	1	1½
Pine, ...	1	1½
Russell, ...	1	1½
Shepard, ...	1	1½
Short, ...	1	1½

STREET.	No.	Size. Inches.
Sparks, ...	1	1 $\frac{1}{2}$
Spring, east from Fourth, ...	1	1 $\frac{1}{2}$
“ west “ “	1	1 $\frac{1}{2}$
“ near Rindge's Block, ...	1	1 $\frac{1}{2}$
Soden, “ the Laundry, ...	1	1 $\frac{1}{2}$
Story, ...	1	1 $\frac{1}{2}$
Sumner, ...	1	1 $\frac{1}{2}$
Sixth, near Cambridge, ...	1	1 $\frac{1}{2}$
Trowbridge, south from Harvard, ...	1	1 $\frac{1}{2}$
Thorndike, near E. Train's, ...	1	1 $\frac{1}{2}$
“ east from Fourth, ...	1	1 $\frac{1}{2}$
“ west “ “	1	1 $\frac{1}{2}$
Temple, ...	1	1 $\frac{1}{2}$
Third, near F. Siverliche's, ...	1	1 $\frac{1}{2}$
Union, “ Hampshire, ...	1	1 $\frac{1}{2}$
Valentine, ...	1	1 $\frac{1}{2}$
Village, near State, ...	1	1 $\frac{1}{2}$
Vine, near Fourth, ...	1	1 $\frac{1}{2}$
Wendell, ...	1	1 $\frac{1}{2}$
Warland, ...	1	1 $\frac{1}{2}$
Ware, ...	1	1 $\frac{1}{2}$
Washington, ...	1	1 $\frac{1}{2}$
Worcester, near Norfolk, ...	1	1 $\frac{1}{2}$
Webster Avenue, north from Cambridge, ...	1	1 $\frac{1}{2}$
Winthrop Place, ...	1	1 $\frac{1}{2}$
Western Avenue, near Howard, ...	1	1 $\frac{1}{2}$
William, ...	1	1 $\frac{1}{2}$

RECAPITULATION.

6,110 feet	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	24-inch iron pipe.
13,147 $\frac{6}{12}$ "	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	20 " " "
10,357 "	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	12 " " "
12,290 $\frac{6}{12}$ "	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	10 " " "
5,916 $\frac{6}{12}$ "	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	10 " cement "
6,000 "	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	8 " iron "
736 $\frac{8}{12}$ "	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	8 " cement "
12,680 "	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	6 " iron "
9,565 $\frac{3}{12}$ "	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	6 " cement "
80,384 $\frac{8}{12}$ "	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4 " iron "
4,463 $\frac{4}{12}$ "	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4 " cement "
28,058 "	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3 " iron "

WATER GATES.

3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	24-inch.
4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	20 "
1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	16 "
12	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	12 "
6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	10 "
3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	8 "
24	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	6 "
115	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4 "
5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3 "

STOP-COCKS.

40	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2-inch.
1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1 $\frac{1}{2}$ "

WASTE GATES.

1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	6-inch.
3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4 "
2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3 "
2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2 "

BLOW-OFF PIPES.

89	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1 $\frac{1}{2}$ -inch.
----	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	------------------------

The leak through the paving and embankment of the new Reservoir was repaired in April, the twelve-inch pipe removed from inside, and the bottom coated with cement mortar one inch thick ; and the Reservoir, having been filled with water since the repairs, shows no indications of leaking. The top course of granite coping has been placed on the wall. The outside wall of Reservoir and the coping require pointing to give a good finish. The fence between Mr. Little's land and that of the City has been built, enclosing the premises on that side of the Reservoir.

The expense at the Pond has been mostly for small repairs on the engines, and for grading the ground about the house built for the engineer and the engine-house. The engines were obliged to pump so constantly, and at such a rate, to keep up the supply of water in the Reservoir, before the main pipes were connected at the engine-house to enable both pumps to work together, that there were repairs to be made quite often, and at one time both engines were broken and the pumping was stopped for several hours, causing considerable anxiety lest the supply of water in the Reservoirs should not be sufficient to last until the engine could be repaired and commence pumping again.

The Works are believed to be in good condition, as far as completed, and the pipes, being laid with lead joints, are less liable to leak and are more readily repaired than when made with cement.

Number of leaks in main pipes, 90, 84 of which were at the joints, one of which was caused by a pick in excavating, one by defective four-inch pipe.

Number of leaks in aqueduct log, 6. The log is in poor condition in many places, and the building and well-room under it will require repairing or to be rebuilt another season.

Number of leaks in supply pipes, 13.

10 supply pipes lowered to prevent freezing.

One 6-inch gate has been set on pipe at the Somerville Bleachery, one 3-inch gate, to replace one broken, for blow-off on Bridge Street, and one 3-inch gate near the Round House, on pipe purchased of the Union Sugar Refinery, in place of one broken.

Average number of gallons of water pumped daily the
past year, ... 1,261,460

Average number of gallons pumped to Reservoir for	
each hundred pounds of coal burned, ...	62,100
Average daily increased consumption over last year,	150,121
Average daily consumption for each taker, ...	293

The supply pipes are increasing to such an extent, 248 having been laid since last report, making the number now laid 2,610, and the calls for small repairs are so numerous, that I believe it will be for the interest of the Water Board to have the takers employ plumbers for repairs on their premises when such repairs can be made without shutting off the water from main pipes.

Main pipe lowered in Western Avenue between Auburn and Howard Streets, and in Spring Street between Seventh and Eighth Streets.

8 new meters have been set during the year, making 14 now set, and at most of the places where they have been set the rates have increased, and in some places very largely, above the rates previously paid.

There have been set since last report 31 new hydrants, and one that was broken has been taken out and a new one put in its place, at the corner of River and Franklin Streets. Most of the new ones are set near the large main pipes, and will make a great addition to the facilities of the Fire Department in case of fires in their vicinities.

STATEMENT OF STOCK ON HAND PERTAINING TO CONSTRUCTION, EXCLUSIVE OF TOOLS.

439 plates annealed iron No. 9	30 × 81½	58,079
2 " " " " 11	36 × 68	152
		58,231 lbs.

Value, at 6c., \$3,493.86

7	24-inch cast-iron pipes.
7	20 " " "
72	12 " " "
3	10 " " "
4	8 " " "
40	6 " " "

46	.	.	.	.	4-inch cast-iron pipes.
11	.	.	.	.	3 " " "
2	.	.	.	.	24 " " $\frac{1}{4}$ bends.
1	.	.	.	.	12 " " $\frac{1}{4}$ "
6	.	.	.	.	4 " " $\frac{1}{4}$ "
10	.	.	.	.	10 " " $\frac{1}{8}$ "
1	.	.	.	.	24 × 20 inch cast-iron T.
1	.	.	.	.	24 × 16 " " "
1	.	.	.	.	24 × 6 " " "
3	.	.	.	.	12 " " "
1	.	.	.	.	10 × 6 " " "
1	.	.	.	.	10 × 4 " " "
3	.	.	.	.	6 " " "
2	.	.	.	.	6 × 4 " " "
5	.	.	.	.	4 " " "
2	.	.	.	.	3 " " "
1	.	.	.	.	20 × 6 inch cast-iron cross.
2	.	.	.	.	12 × 4 " " "
4	.	.	.	.	6 " " "
3	.	.	.	.	4 " " "
3	.	.	.	.	3 " " "
1	.	.	.	.	24-inch cast-iron sleeve.
3	.	.	.	.	12 " " "
3	.	.	.	.	10 " " "
3	.	.	.	.	8 " " "
5	.	.	.	.	6 " " "
8	.	.	.	.	4 " " "
4	.	.	.	.	3 " " "
1	.	.	.	.	24 × 10 inch cast-iron reducer.
2	.	.	.	.	6 × 4 " " "
1	.	.	.	.	4 × 3 " " "
11	.	.	.	.	4 inch cast-iron set-off pipes.
4	.	.	.	.	cast-iron hydrant frames and covers.
7	.	.	.	.	hydrants.
1	.	.	.	.	24-inch gate.
1	.	.	.	.	20 " "
1	.	.	.	.	16 " "
1	.	.	.	.	12 " "

1	.	.	.	.	10-inch gate.
1	.	.	.	.	8 " "
1	.	.	.	.	6 " "
5	.	.	.	.	4 " "
2	.	.	.	.	3 " "

4,500 lbs. lead.

400 " hemp packing.

259 tons coal.

Respectfully submitted,

WM. H. PRATT,
Superintendent.

C.

REPORT

ON

THE NEW PUMPING ENGINES.

CITY OF CAMBRIDGE,
IN WATER BOARD, August 6, 1867.

THE Committee appointed to consider and report what Engines are most suitable for the enlargement of the pumping-power of the Cambridge Water Works, beg leave to

REPORT

That they have given careful attention to the subject of a supply of water to our fast-growing City, whose constantly increasing demand for water is fast over-taxing our pumping-engines, — engines which are delivering more than double the quantity of water they were expected or guaranteed to supply, even after a constant service of more than ten years.

It has never been thought safe by any board or engineer to depend upon one engine to supply a city or town with water, as there must of necessity be many repairs and overhauls to keep them in order, if there should be no breakdowns that would require the stoppage of the pumps, and thereby cut off the supply of water.

We find our City is virtually in this condition, as the consumption is so great that one engine is unable to meet the wants of the City at the present time, although run at a truly dangerous speed, which is also unprofitable as to the item of wear and tear, while the finality of the engines is much sooner reached.

In our present condition we have arranged to run both pumps at a slower rate, and while they are both running they can supply the City at the present time; but how much of the time both can be run is contingent, to such an extent as to be *absolutely unsafe*, where there is so great an interest dependent as the supplying of the City of Cambridge with water.

The well-room of our engines is not low enough to allow of a full supply to both engines, even when the water is as high as at the present time.

Your Committee believe that the Water Board are of one mind in regard to the necessity of providing increased pumping-power, as soon as it can be determined what is best to be done to furnish this increase; and they also believe that the City Council will grant any appropriation that may be requisite for the purpose of a judicious enlargement of the Works for the benefit of the citizens at large.

Before deciding upon so important a matter, your Committee thought best to examine the Steam Pumping Engines at Philadelphia, —where there are seven in all, of various forms of construction, and all using the stand-pipe, — and especially to ascertain the economy of the famous Cornish Engine, — of which there are three in Philadelphia, and it is proposed to erect two more,—and also to learn the difficulties of using a stand-pipe and the advantages of the same, if any should appear.

This latter object seemed very important at the present time, as we have already expended about twenty thousand dollars in almost completing a stand-pipe for our Works; and many grave doubts have been expressed by some who have been professionally employed in its construction and on other parts of the Works, which have passed current in the community as settled facts, to wit, “That the stand-pipe is a failure,” “That it will never work,” “That it was a most foolish expenditure of money,” etc. These doubts have led many members of the City Council to question the wisdom of the Water Board in this expenditure, although it was advised by the distinguished water engineer from New Jersey, Mr. Bailey, who came here and examined the Works professionally soon after they became the property of the City, and submitted several sketches and plans

for its erection, one of which was adopted substantially by this Board, and the details of its construction were committed to a resident engineer, Mr. Chase, who has finished the work with the exception of about twenty-two feet of the stand-pipe and the corresponding overflow-pipe.

One of your Committee visited Philadelphia, and lost no time in putting himself in communication with the Chief Engineer of that city, Mr. Graff, who is considered one of the best engineers in the country. Mr. Graff accompanied him to the different works, and gave all the information desired in regard to the workings of the several engines and stand-pipes, and the economy of the Cornish Engine, and allowed him to take two of their monthly statements of all their works, from which we deduce the following comparative results of the Cornish Engine and those now in use at our Works: —

The Spring Garden beam Cornish Engine, with steam-cylinder 60 inches in diameter and 16 feet stroke, making 10 strokes per minute, on one end of beam, and on the other a pump with plunger 30 inches in diameter, 10 feet stroke, and heavy enough to balance a column of water 125 feet high in stand-pipe, shows the duty, taking the average of a month's work, to be 50,000 gallons raised 1 foot high with 1 pound coal.

The Kensington Works on the Delaware, with ordinary low-pressure engine, same size of cylinder, and same length stroke, working, with a bell-crank motion, a horizontal pump, raising water same height, taking same average, shows a duty of only 24,000 gallons raised 1 foot high with 1 pound coal.

Then taking the engines of our own Works, on a month's average, we find a duty of 52,800 gallons raised 1 foot high with 1 pound coal, being 2,800 gallons more raised 1 foot high with 1 pound coal than by the Cornish Engine, thereby establishing the economy of the engines we now have by a large balance in their favor.

The next question to be considered was the stand-pipe. We found each of the different works had a stand-pipe. At the Kensington Works the water in the stand-pipe averages 17 feet higher than that in the reservoir, two miles distant, into which the pipe empties. In such a case the stand-pipe acts as

a relief to the pumps, by allowing the water to rise up in the pipe with each pulsation of the pumps, when to move the water at varying velocity in a pipe two miles long would be impracticable, and consequently would overstrain the pumps and cause a loss of power.

The West Philadelphia Works have two Cornish Engines working into a stand-pipe without a reservoir, and are self-regulating, to a great extent, by the pressure of the water in the stand-pipe. A mercury-gauge shows any variation that may take place, and a telegraphic fire-alarm signal in the engine-house informs the engineer when an extra supply is wanted.

There is one great objection to this manner of supply, especially at these works, where the engines are so nearly connected that one cannot be repaired without stopping both, which prevents their being kept in proper order. The supply lasts but a very short time, and it has therefore been determined by the Philadelphia government to build a reservoir in connection with the stand-pipe, and put in two new Cornish Engines with 84-inch cylinders.

Enough was seen to convince us that we are right in the matter of a stand-pipe for our Works, and that it is the most practicable way of serving the high lands in our City, and giving a full supply to all parts that are now partially served, at the same time affording greater protection in case of fire. While we have no higher land on which we can build a reservoir, we can raise our head to any required height by means of this pipe.

The next question was, can the engines we now use be made to work into a stand-pipe and maintain a nearly constant head, with an ever-varying consumption? If this can be done, then we have the best plan yet devised for supplying our City with water. To ascertain this fact, your Committee waited on Mr. H. R. Worthington, the builder of our engines, and submitted to him a plan for regulating the motion of the engines by the pressure of the column of water in the stand-pipe. After due consideration, Mr. Worthington writes his views upon the subject, which letter is considered a part of this report.

“NEW YORK, July 24, 1867.

“MR. A. K. P. WELCH, Cambridge:—

“DEAR SIR,—Our study thus far seems to favor the plan you propose for a high service. It is especially interesting for the reason that it puts a water supply within reach of many places where the usual system is not applicable. In fact, your own case illustrates its utility very plainly. Without it, I do not see how your high places are to be reached.

“It seems clear to me that a very satisfactory result can be reached, even if we fail to secure the exact regulation your plan contemplates; and I am willing to trust it far enough to guarantee the engines against damage or injury resulting from the high-service pipe.

“I know we can do well, and I am by no means sure that we cannot reach all you propose. If we do, it will certainly extend the area of my field, and I am ready to do my part.

“Truly yours,

“HENRY R. WORTHINGTON.”

Your Committee have come to the conclusion to recommend for the enlargement of the Cambridge Water Works a Duplex Worthington Engine, like one of those at Charlestown, which is capable of raising 5,000,000 gallons in twenty-four hours, and that the same be placed at the end of the present engine-house so as to connect with the branch of the 24-inch main put in for that purpose; and that a deeper well-room be made to such engine, and a conduit be constructed into deep water to supply the same; and that the work be commenced as soon as circumstances will allow.

All which is respectfully submitted,

A. K. P. WELCH, }
SAML. SLOCOMB, } *Committee.*

Accepted, and the recommendations adopted.

Attest:

JUSTIN A. JACOBS, *Clerk.*

CITY OF CAMBRIDGE,
IN WATER BOARD, December 13, 1867.

The Committee to whom were referred the propositions of the Duplex Rotary Pump and Steam-Engine Company, and of George F. Blake & Co., to furnish the additional pumping apparatus required for the Cambridge Water Works, have given such attention to the subject as the propositions seemed to demand.

The cost of their engines being much below the cost of the one recommended by your Committee, at first thought many persons would judge they should have been purchased. But there are matters to be considered of greater importance than the first cost of any piece of machinery, especially a steam pump, — the cost of running and repairs, the durability of the machine, and, above all, the DUTY (that is, the number of pounds raised one foot high with the consumption of one pound of coal).

The rotary engine and pump above referred to have a new form of revolving cams, fitting into each other and to the sides of the case nearly steam-tight. This engine is on the high-pressure principle. The pump is on the same principle as the engine, although the cams do not touch the sides of the case, which prevents the friction that would otherwise take place, but allows a large quantity of water to flow back, especially under one hundred feet head, which would greatly reduce the theoretical discharge.

There are no data from which the economy of this pump can be ascertained from actual experiment, but the results of the various engines and pumps, with such comparisons as will follow, are the reasons the Committee give for the conclusions they have reached.

The steam pump proposed by George F. Blake & Co. is probably the best direct-acting high-pressure pump for boiler feeders and where fuel is cheap, or where a pump is wanted for but a short time and the fuel is of no consequence in comparison with the interest of the money on first cost; but when large and permanent power is required, as for steamships, ferry-boats, factories, &c., low-pressure engines are used for economy of fuel, although

their first cost and weight are nearly double those of high-pressure engines of the same power.

The parties desiring to furnish these high-pressure engines do not claim that they are economical in fuel, or that they can even compete with an ordinary low-pressure engine, while the engines we now have are a combination of the high and low-pressure principles. The inner cylinder is high-pressure, and receives steam the full length of the stroke; the steam then exhausts into an outer low-pressure cylinder, to which is attached an apparatus for condensing all the steam on the opposite side of the piston, thus producing a vacuum equal to twenty-seven inches of mercury, which adds greatly to the power and economy of the engine, as will be seen by comparing the results of a test experiment made with the Cambridge engines at the request of James P. Kirkwood, Esq., Chief Engineer of the Brooklyn Water Works.

“NEW YORK, June 29, 1857.

“The undersigned, having tested the performance of a pumping engine erected at Cambridge, Massachusetts, for the Water Works at that place, by Mr. H. R. Worthington, herewith submit the result of that test, with the data from which it was deduced.

“As it appeared to be desirable that the conditions of the trial should approach as nearly as possible those of daily working practice, and the boilers not being the subject of exclusive test, it did not seem essential that the time necessary to raise steam in them should be ascertained, nor the fuel for that purpose noted. The fires, engine, and boilers were put into fair working condition and run until the furnaces required fuel; the amount of the fuel in them was then carefully estimated from measurement, the intensity of the fires closely observed, and the steam pressure noted, as also the level of the water in the boilers.

“The test was then commenced and continued for the time mentioned below, care being taken that the condition of the fires and pressure of steam should be as near as possible the same at the termination as at the commencement of the trial.

“The amount of load upon the pumps was ascertained from its area and carefully observed indications of an Ashcroft pressure-gauge placed upon the delivery pipe, an estimated addition being

made for the height the water was drawn and forced between the centre of the gauge and the surface of the water in the pump-well; the total pressure thus obtained being thirty-three pounds to the square inch.

“The total number of strokes made by the engine, amounting to 33,678, was obtained from a counter placed upon it, and confirmed by the average of numerous counts made during the trial.

“The length of stroke of the plunger (the average of thirteen careful measurements) was two and one sixth feet.

“The total coal consumed was 508.5 pounds. The duration of the test fourteen hours forty-six minutes.

“The data will then be as follows:—

“150.521 inches area $\times$ 33 pounds = 4,967.193 pounds load upon the plunger. 33,678 strokes $\times$ $2\frac{1}{6}$ feet = 72,969 feet travelled by the plunger. Then $\frac{4,967.193 \times 72,969}{508.5} \times 100 = 71,278,486$ pounds lifted 1 foot high with 100 pounds coal. Previous to the trial, the scales upon which the coal was weighed were placed in a permanent position, examined and sealed; a copy of the certificate of the sealer as to their correctness is appended hereto. The Ashcroft gauge used was tested by the manufacturers after the trial, and their certificate of the amount of its error is also attached. The correction of this error has of course been made in the data given.

“The pump was opened, the diameter of the plunger and its piston-rod measured, during which time the tightness of the delivery valves and plunger under pressure of the column of water was observed.

“The leakage was very small, that of the valves being just appreciable, of the plunger comparatively very little more.

“Effort was made to obtain a measurement of the Reservoir with a view of ascertaining, if possible, the amount of water actually delivered by the pump during stated periods; it was found, however, impracticable to arrive at any satisfactory result on account of the irregularity of the slope sides, the unknown vacancies behind the stone lining, the absorbent character of the embankment, and the probable leakage of a reservoir of that size and description.

“The pumping main is brought up perpendicularly above the surface of the water in the Reservoir, which admits of its being seen. Observation satisfied us that the water was delivered from it with great regularity, and did not contain any undue amount of *air*.

“The clothing of the steam pipes and cylinders, although good, is not as strictly guarded in that respect as is usual with the Cornish Engines in England. During the experiment the gauges were so placed as to afford an accurate indication of frictional resistances, showing that a head of 6.05 feet was required to overcome the friction of the water through the pump and main; in other words, the difference between the surveyed height and that indicated by the gauge was 6.05 feet.

“The general character of the design and workmanship of the engines is quite creditable, and they appear to be simple, reliable, and durable. During the trial everything worked satisfactorily, and required very little attention from the engineer.

“(Signed,)

“FREDERICK GRAFF,
ERASTUS W. SMITH.

“TO JAMES P. KIRKWOOD, Esq.,
Chief Engineer Brooklyn Water Works Co.”

From the above report we learn what the engines now in use at our Works are capable of doing, and it is not uninteresting to compare the duty of these engines with that of others.

As some persons have tried to impress upon the public mind that a Cornish Engine known as the “Bull Engine,” which has its steam cylinder directly over the water cylinder, and has no walking beam like the usual style Cornish, should have been adopted by this Board. This engine costs much more than the one adopted, and the duty is as follows,—as seen by Mr. Burkenbine’s Report, 1866, page 26. (Mr. Burkenbine was then Engineer of the city of Philadelphia, and is the patentee of this style of engine, which raised, with 100 pounds coal, 46,348,900 pounds 1 foot high.)

Our engines raised, with 100 pounds coal, 71,278,486 pounds.
Balance in favor of Cambridge engines, 24,929,586 pounds.

“Bull Engine,” again, as per Report 1867, page 28, raised, with 100 pounds coal, 49,653,090 pounds 1 foot high. Balance in favor of Cambridge, 21,625,396 pounds.

Then take the Report on the Schuylkill Works, 1866, page 21, and we find that 100 pounds coal raised 38,649,100 pounds 1 foot high. Balance in favor of Cambridge, 32,629,386 pounds, — nearly double the duty.

Then turning to Report of 1866, page 22, on the Delaware Works, we find that 100 pounds coal raised only 19,954,100 pounds, while the Cambridge engines raised 71,278,486 pounds 1 foot high. Balance in favor of Cambridge, 51,324,386 pounds.

We will now look at the reported duty of the Duplex Worthington Engine recommended by your Committee for our Works, which is a great improvement on those now in use here, and has proved to be the best pumping engine in this country. By the Report for 1865 on the Charlestown Water Works, — where two of these engines of 5,000,000 gallons’ capacity each are in use alternately, — which must be considered as correct as those of Philadelphia, we find a duty of 77,444,500 pounds raised 1 foot high with 100 pounds coal on a year’s average (= 96,805 gallons water raised 1 foot high with 1 pound coal), which gives a balance, in favor of the Duplex at Charlestown over the “Bull Engines,” of 31,095,600 pounds raised 1 foot high for each 100 pounds coal consumed.

The Charlestown Report of 1866 shows a yearly average duty of 69,579,100 pounds raised 1 foot high with 100 pounds coal.

THE COST OF ENGINES, ETC.

The foundations of the Jersey City Works with Cornish Engine cost more than the foundations and pumps at the Charlestown Works and are of *less capacity*.

The engines cost	\$ 70,000.00
Stand-pipe, engine-house, and foundation	80,000.00
Total	<u>\$ 150,000.00</u>

The same engines will now cost at least \$100,000.

A Cornish Engine cost in Philadelphia, sixteen years ago, without foundations and fixtures, \$60,000.

The Duplex Worthington Engine recommended by your Committee, with a capacity of 5,000,000 gallons in twenty-four hours, together with boilers, pipes, and foundation complete, and running to the satisfaction of the Water Board, will cost \$40,000.

COST OF RUNNING ENGINES, FOR ATTENDANCE, ETC.

The 24th Ward, Philadelphia, Bull Engines, two in number, raised a daily average in 1866 of 1,468,283 gallons.

Salaries of engineers and firemen	\$4,400.00
Repairs	1,652.27
Duplex Engine at Charlestown, with a capacity of 5,000,000 gallons, cost for engineers and firemen	\$2,562.50
Repairs	None.

COST OF SUPPLYING SEVERAL CITIES WITH WATER.

Croton Works, first cost	\$12,000,000.00
Each million gallons' capacity	300,000.00
Cochituate Works, first cost	5,200,000.00
Each million gallons' capacity	325,000.00
Cambridge Works, first cost	250,000.00
Each million gallons' capacity	166,666.00
Cost of the Works with the new pumps, about	580,000.00
Each million gallons' capacity	90,000.00

COST OF PUMPING WATER BY STEAM IN SEVERAL CITIES.

Buffalo, Bull Cornish Engine, ...	\$17.35 per million gallons.
24th Ward, Philadelphia, Bull Cornish Engine, ...	23.73 " " "
Cambridge, Worthington Engine, ...	13.70 " " "

The cost of coal is from \$1.75 to \$3.00 per ton higher in Cambridge than in Philadelphia.

Your Committee have given the foregoing data, thinking they might be of interest to those desiring to learn on what ground the Committee based their report which recommended the adoption of the Duplex Engine in preference to the much cheaper kinds offered, and also to show the cost of other Water Works as compared with our own, as well as the cost of working the same.

All which is respectfully submitted,

A. K. P. WELCH, }
SAML. SLOCOMB, } *Committee.*

GOVERNMENT
OF
THE CITY OF CAMBRIDGE.
1868.

MAYOR.
HON. CHARLES H. SAUNDERS.

ALDERMEN.
MARSHALL T. BIGELOW, WILLIAM PAGE,
DANIEL U. CHAMBERLIN, SAMUEL B. RINDGE,
WATSON B. HASTINGS, JABEZ A. SAWYER,
U. TRACY HOWE, DANIEL R. SORTWELL,
JOHN S. MARCH, SAMUEL F. WOODBRIDGE.

Aldermen by Wards.
Ward 1, Aldermen BIGELOW and HOWE.
“ 2, “ CHAMBERLIN, MARCH, and RINDGE.
“ 3, “ HASTINGS and SORTWELL.
“ 4, Alderman PAGE.
“ 5, Aldermen SAWYER and WOODBRIDGE.

COMMON COUNCIL.

KNOWLTON S. CHAFFEE, *President.*

Ward I.

CHARLES C. CLAPP,
HENRY W. MUZZEY,SAMUEL SNOW,
CHARLES F. WALCOTT.

Ward II.

ALVARO BLODGETT,
LUCIEN S. LEARNED,ELIJAH H. LUKE,
WILLIAM J. MARVIN,
JAMES MELLEN.

Ward III.

KNOWLTON S. CHAFFEE,
JEREMIAH W. COVENEY,JOHN W. HAMMOND,
B. J. MCCORMIC,
GEORGE W. T. RILEY.

Ward IV.

JOSEPH CHILD, JR.,
LEANDER GREELY,HENRY O. HOUGHTON,
JAMES H. SPARROW.

Ward V.

NOAH M. COFRAN,

HORATIO LOCKE.

Clerk.

J. WARREN COTTON.

CITY CLERK.

JUSTIN A. JACOBS.

CITY MESSENGER.

ROLAND LITCHFIELD, JR.

COMMITTEES OF THE CITY COUNCIL.

JOINT STANDING COMMITTEES.

On Finance.

COMMON COUNCIL.

The MAYOR.

The President,
Samuel Snow,
Lucien S. Learned,
George W. T. Riley,
Horatio Locke.

ALDERMEN.

Samuel B. Rindge,
Marshall T. Bigelow.

On Public Instruction.

COMMON COUNCIL.

U. Tracy Howe,
Jabez A. Sawyer.

The President,
Charles F. Walcott,
Henry O. Houghton,
John W. Hammond.

ALDERMEN.

On Ordinances.

COMMON COUNCIL.

John S. March,
Jabez A. Sawyer.

Henry W. Muzzey,
John W. Hammond,
James H. Sparrow.

ALDERMEN.

On Accounts.

COMMON COUNCIL.

William Page,
John S. March.

Joseph Child, Jr.,
Alvaro Blodgett,
Noah M. Cofran.

ALDERMEN.

On Public Property.

COMMON COUNCIL.

Daniel U. Chamberlin,
Daniel R. Sortwell.

William J. Marvin,
Horatio Locke,
Jeremiah W. Coveney.

ALDERMEN.

On the Almshouse.

COMMON COUNCIL.

Samuel B. Rindge,
Samuel F. Woodbridge.

Henry O. Houghton,
Jeremiah W. Coveney,
Charles C. Clapp.

ALDERMEN.

On Roads and Bridges.**ALDERMEN.**

Samuel F. Woodbridge,
William Page.

COMMON COUNCIL.

Alvaro Blodgett,
James H. Sparrow,
Noah M. Cofran.

On Reservoirs and Drains.**ALDERMEN.**

Daniel R. Sortwell,
U. Tracy Howe.

COMMON COUNCIL.

James Mellen,
Leander Greely,
B. J. McCormic.

On Fuel.**ALDERMEN.**

Marshall T. Bigelow,
Daniel U. Chamberlin.

COMMON COUNCIL.

Elijah H. Luke,
Charles F. Walcott,
George W. T. Riley.

On Lamps.**ALDERMEN.**

Jabez A. Sawyer,
John S. March.

COMMON COUNCIL.

Lucien S. Learned,
Leander Greely,
Samuel Snow.

On Watering Streets.**ALDERMEN.**

William Page,
Watson B. Hastings.

COMMON COUNCIL.

Jeremiah W. Coveney,
Charles C. Clapp,
Elijah H. Luke.

On Printing.**ALDERMAN.**

Marshall T. Bigelow.

COMMON COUNCIL.

Henry W. Muzzey,
James Mellen.

On the Fire Department.**ALDERMEN.**

Watson B. Hastings,
U. Tracy Howe.

COMMON COUNCIL.

Horatio Locke,
William J. Marvin,
B. J. McCormic.

STANDING COMMITTEES OF THE BOARD OF MAYOR AND ALDERMEN.

On Police.

The Mayor,	Marshall T. Bigelow,
Samuel B. Rindge,	Daniel R. Sortwell.

On the Fire Department.

Watson B. Hastings,	John S. March,
U. Tracy Howe.	

On Roads and Bridges.

Samuel F. Woodbridge,	Daniel U. Chamberlin,
William Page.	

On Reservoirs and Drains.

Daniel R. Sortwell,	Samuel B. Rindge,
U. Tracy Howe.	

On Licenses.

John S. March,	Jabez A. Sawyer,
Watson B. Hastings.	

On Health.

William Page,	Daniel U. Chamberlin,
Samuel F. Woodbridge.	

STANDING COMMITTEES OF THE COMMON COUNCIL.

On Elections and Returns.

Samuel Snow,	Elijah H. Luke,
John W. Hammond.	

On Bills in the Second Reading.

Charles C. Clapp,	Horatio Locke,
Leander Greely.	

On Enrolled Ordinances.

Henry W. Muzzey,	George W. T. Riley,
Joseph Child, Jr.	

Assessors.

CHARLES H. SAUNDERS,
ARTEMAS Z. BROWN,
ANDREW J. GREEN.

Assistant Assessors.

JOHN C. FARNHAM, OZIAS CLARK,
RUFUS LAMSON, ISAAC C. HOLMES,
EDWARD G. LYNES.

Auditor of Accounts.

SAMUEL P. HEYWOOD.

Treasurer.

JOSEPH WHITNEY.

Collector of Taxes.

JOSEPH WHITNEY.

Measurers of Wood and Bark.

James H. Fuller, Francis H. White,
John R. Taylor, Benjamin J. Hoyt,
J. Henry Patch, I. P. Estes,
Dalphon Osborn, J. Henry Wyman.

Fence-Viewers.

George B. Lothrop, Abiel Goss,
Abel Stevens.

Field-Drivers.

Andrew Sproul, Benjamin F. Bridden,
Timothy Ames, Thomas Work,
Thomas D. Cook, Amori Benson, Jr.,
James S. Milliken, George A. Marston.

Pound-Keepers.

George W. Ames, Thomas D. Cook,
George A. Marston.

Fish Officers.

Thomas D. Cook, Jacob Hanscom,
Andrew Sproul.

Hay Weighers.

Franklin M. Flanders, Ivory P. Estes,
William C. Brooks, Francis H. White,
Benj. F. Boyden, Joseph Burrridge, Jr.,
E. W. Law.

Coal Weighers.

James F. Jefferds, George S. Graves,
Joseph Burrridge, Jr., J. Henry Wyman,
Wm. H. Raymond, William C. Brooks,
John Henry Patch, E. W. Law,
Thos. McIntire, Jr., George S. Wright,
Wm. A. Hunnewell, Jones Valentine.

Weigher of Boilers and Heavy Machinery.

Joseph Burrridge, Jr.

Sealer of Weights and Measures.

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_____.

Inspector of Milk.

_____.

Surveyors of Mechanics' Work.

William S. Barbour, William A. Mason.

Inspector of Charcoal Baskets.

_____.

Measurer of Grain.**Auctioneers.**

Samuel R. Knights,	John L. Porter,
John C. Farnham,	Wm. A. Munroe,
Samuel C. Knights,	Barnabas Binney,
J. E. Forbush,	Edward G. Lynes,
R. A. Adams.	H. A. Burkett.

School Committee.

Charles H. Saunders, Mayor, *ex officio*, *Chairman*.

WARD I.

Francis J. Child,	William W. Goodwin,
Morrill Wyman.	

WARD II.

Thomas Scully,	Hamlin R. Harding,
Edward Abbott.	

WARD III.

Joseph H. Tyler,	John W. Hammond,
Grove H. Loomis.	

WARD IV.

John Appleton,	Edwin B. Chase,
Asa P. Morse.	

WARD V.

Herbert H. Stimpson,	Martin Draper, Jr.,
James R. Morse.	

SECRETARY.

W. W. Wellington.

Overseers of the Poor.

The Mayor, *ex officio*, *Chairman*.

William Caldwell,	Joseph H. Rice,
J. Watson Harris,	Martin L. Smith,
Jacob L. Bailey,	Lewis B. Guyer.

CLERK.

Benjamin F. Wyeth.

Warden of the Almshouse.

Jacob Hanscom.

Physician of the Almshouse.

James R. Morse, M. D.

Board of Engineers.

CHIEF ENGINEER.

GEORGE B. EATON.

ASSISTANT ENGINEERS.

First Assistant, Thomas J. Casey,
 Second " Jacob A. Holt,
 Third " Joseph H. Marvin,
 Fourth " P. H. Raymond.

CLERK OF THE BOARD.

Board of Health.

The MAYOR AND ALDERMEN.

Cambridge Cemetery.

COMMISSIONERS.

The Mayor, *ex officio*.

John C. Farnham,	Z. L. Raymond,
Daniel U. Chamberlin,	Charles M. Hovey,
George S. Saunders,	Joseph H. Tyler.

SUPERINTENDENT.

James K. Farwell.

Superintendents of Burial Grounds.

WARD I.

Benj. F. Wyeth.

WARD II.

John Pear.

Undertakers.

Benj. F. Wyeth,	William Casey,
Roland Litchfield,	Jacob C. Seelye,
John Pear,	Alvah A. Hadley,
Samuel F. Hunt,	Benj. J. Hoyt,
Thomas Devens.	

Police Court.

STANDING JUSTICE.

JOHN S. LADD.

SPECIAL JUSTICES.

George W. Livermore,	Henry W. Muzzey.
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CLERK.

Thomas McIntire, Jr.

Police Department.

CHIEF OF POLICE.

FORDYCE M. STIMSON.

PRINCIPAL CONSTABLES.

DISTRICT I.

Fordyce M. Stimson.

DISTRICT II.

William Twist.

DISTRICT III.

John L. Boynton.

CONSTABLES.

Fordyce M. Stimson,	Clark Moore,
William Twist,	Charles J. Adams,
John L. Boynton,	James C. Nute,
John C. Burdakin,	James F. Jefferds,
Thomas W. Frederickson,	Thomas Work,
Thomas McIntire, Jr.	

POLICEMEN.

DISTRICT I.

Timothy Ames,	George A. Marston,
Thomas D. Cook,	Benj. Kennard,
James B. Morse,	Moses M. Child,
Micah W. Cook,	John S. Milliken,
Andrew Sproul,	Leonard Shackford,
Kidder A. Livermore,	Albert D. Cleveland.

DISTRICT II.

Benjamin F. Bridden,	James H. Parks,
Abel A. Hildreth,	Fred. W. Hagar,
Geo. H. Copeland,	John Avery,
Daniel Sherman,	George Wood,
Charles L. Russell,	George S. Dudley.

DISTRICT III.

Amori Benson, Jr.,	Henry Kinsley,
William Mullett,	Moses W. Hooper,
Thomas D. Sanborn,	Matthew R. Moore.

FIRE POLICE.

George S. Pike,	Moses Ricker,
James M. Hilton.	

TRUANT OFFICERS.

Fordyce M. Stimson,	Benj. F. Bridden,
John L. Boynton,	Moses M. Child,
Abel A. Hildreth,	Thomas D. Cook,
Amori Benson, Jr.	

SPECIAL POLICEMEN.

George B. Eaton,	Thomas G. Bruce,
Thomas J. Casey,	Roland Litchfield, Jr.,
Jacob A. Holt,	James C. Nute,
Joseph H. Marvin,	Austin J. Coolidge,
P. H. Raymond,	Daniel L. Winsor,
Roland Litchfield,	Joseph G. Bicknell,
Austin K. Jones,	Albert E. Clark,

Wm. D. Whittemore,
James F. Jefferds,
William Locklin,
Stephen E. Day,
Cornelius Daily,
John Close,
George H. Capen,
Leonard Bacon,
Warren W. Simonds,

Amos Jones,
Joseph Foss,
Robert C. Brown,
Hastings Gifford,
John Fuzzard,
J. S. Dolbeare,
Abner J. Osborn,
James K. Farwell,
Jacob Hanscom.

Surveyors of Highways.

The same persons who compose the Board of Mayor and Aldermen.

City Engineer and Surveyor.

JOSIAH G. CHASE.

Superintendent of Streets and Drains.

GEORGE L. CADE.

Superintendent of Lamps.

ROLAND LITCHFIELD.

Trustees of the Dana Library.

The Mayor, *ex officio*, Chairman.

ALDERMAN.

William Page.

COMMON COUNCIL.

Alvaro Blodgett.

CITIZENS AT LARGE.

Charles Deane,

Anson Hooker,
W. W. Wellington.

LIBRARIAN.

Miss C. F. Orne.

Cambridge Water Board.

The Mayor, and President of the Common Council, *ex officio*.

A. K. P. Welch,	Samuel Slocomb,
John Sargent (President),	Robert Douglass,
Chester W. Kingsley.	

CLERK.

Justin A. Jacobs.

Superintendent of Water Works.

WILLIAM H. PRATT.

Water Registrar.

ABIEL F. FIFIELD.

Trustees of the Sanders Temperance Fund.

The Mayor, and President of the Common Council, *ex officio*.

ALDERMAN.

Samuel B. Rindge.

COMMON COUNCIL.

Lucien S. Learned,
Henry O. Houghton.

Trustees of the Dowse Institute.

The Mayor, and President of the Common Council, *ex officio*.

Charles Deane,	John C. Dodge,
W. W. Wellington.	

Representatives in General Court.

Richard H. Dana, Jr.,	John Livermore,
Curtis Davis,	John McDuffie,
Anson P. Hooker.	

WARD OFFICERS.

Ward I.

WARDEN.

James H. Wyeth.

CLERK.

Robert Torry, Jr.

INSPECTORS.

Leonard Lyon,
Saml. E. Chamberlain,
Joseph Williams.**Ward II.**

WARDEN.

James H. Hall.

CLERK.

H. Norman Cotton.

INSPECTORS.

Charles R. Patch,
George C. Howlett,
William B. Pear.**Ward III.**

WARDEN.

Luther L. Parker.

CLERK.

Frank D. Wheeler.

INSPECTORS.

Abbot R. Davis,
Thomas Grieves,
John McSorley.**Ward IV.**

WARDEN.

Gustavus A. Smart.

CLERK.

William H. Whitney.

INSPECTORS.

Charles H. Spencer,
Daniel D. Leeds,
Albert J. Sawyer.**Ward V.**

WARDEN.

James R. Morse.

CLERK.

Francis H. White.

INSPECTORS.

J. A. Wellington,
Warren Cutter,
William T. Bryant.

CAMBRIDGE PUBLIC LIBRARY.

LIBRARY HOURS, FROM 10 A.M. TO 9 P.M. DAILY,
Sundays and Holidays Excepted.

NO BOOKS DELIVERED AFTER 8 P. M.

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Cards **must always** accompany books returned.

Marks in books, by pencil or otherwise, and turning down corners of leaves, are prohibited.

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Encl. &c.

